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USER'S MANUAL AND ANALYSIS PROCEDURES FOR THE MATERIAL
HANDLING EQUIPMENT SIMULATION MODELS(U) DAVID TAYLOR
RESEARCH CENTER BETHESDA MD P E FRIEDENBERG ET AL.

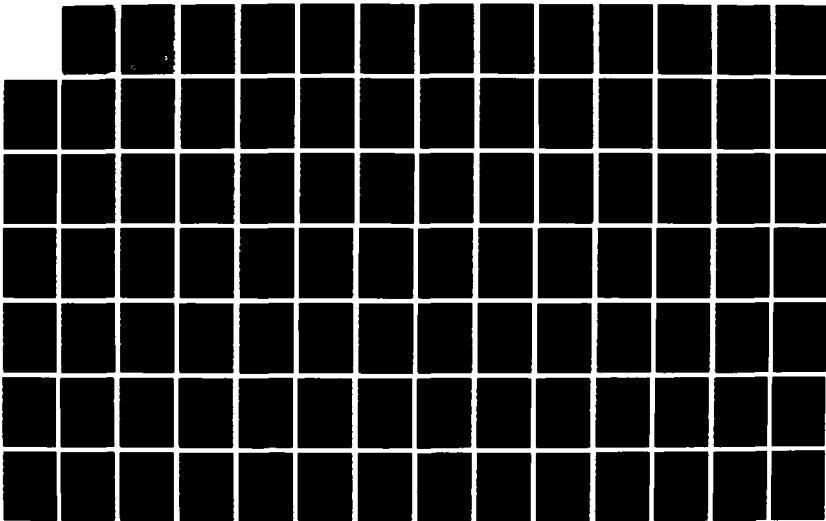
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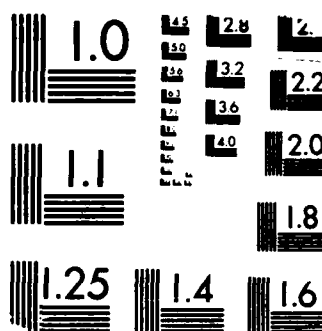
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Computation, Mathematics and Logistics Department
Research and Development Report

User's Manual and Analysis Procedures for the Material Handling Equipment Simulation Models

by

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James C. Chesley

Benjamin Siegel

**DTRC-88/008 User's Manual and Analysis Procedures for the Material Handling Equipment
Simulation Models**



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<p>The three computer models described in this user's manual simulate the use of material handling equipment (MHE) at three distinct types of U.S. Navy installations (Main Supply, Ship Overhaul, and Weapons Supply). Input consists of data describing operational characteristics of the MHE, materials delivery data for cargo arrivals, and issue document specifications.</p> <p>Model output is composed of computer generated data describing MHE utilization and throughput data which tabulates the movement of cargo within this system as a function of time. The model output is designed to assist an analyst in the determination of specific MHE utilization requirements for any given U.S. Navy installation.</p> <p>An analysis of sample simulation run results is also included in this report.</p> <p><i>forklifts; cranes; side loaders; straddle trucks; pallets;</i></p>					
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Forklifts
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Prearrival staging

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Throughput data
Live explosive
Bomb buildup area

Weapons assembly
Sideloaders
Straddle trucks
Ripout

Input parameters
Ship overhaul support

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Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
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TERMS AND ABBREVIATIONS

Availability	A measure of the degree to which an item of MHE is in an operable and committable state at the start of a mission when the mission is called for at either an unknown (unscheduled) or known (scheduled) time
BDU	Bomb Dummy Unit
Bomb Buildup Area	The location at which weapons are assembled from their component parts
CIP	Capital Improvement Productivity
CNO	Chief of Naval Operations
Community	Material handling equipment which is shared by two or more different functional areas
CONUS	Continental United States
CM (Corrective Maintenance)	The actions performed to restore an item of MHE to a specified condition after failure
DLSIE	Defense Logistics Studies Information Exchange
Down Time	Time during which material handling equipment is unavailable for use due to maintenance and/or repair requirements
DTRC	David Taylor Research Center
DTO	Direct Turnover
Elongated	Extended length heavy bulky material (such as piping)
FMO	Facilities Management Office
GAO	General Accounting Office
GBL	Government Bill of Lading
Inert	Non-explosive cargo/material handled by the material handling equipment within the Weapons Supply model

TERMS AND ABBREVIATIONS (Continued)

L&E	Labor and Equipment
Live Explosive	Explosive cargo/material handled by the material handling equipment within the Weapons Supply model
MHE	Material Handling Equipment
MHE Availability	A measure of the time during which a piece of MHE is in an operable state at the start of a mission
MHE Performance	A measure of the capability of MHE to execute and complete appointed duties or tasks
MHE Utilization	A measure of the extent to which a piece of MHE is employed in performing a task during its time of availability
MOEs	Measures of Effectiveness
MTIS	Material Turn Into Store
NARF	Naval Air Rework Facility
NAF	Naval Air Station
NAVSUP	Naval Supply Systems Command
NDW	Naval District Washington
NIF	Navy Industrial Fund
NNSY	Norfolk Naval Shipyard
Non-community	Material handling equipment which is dedicated to one specific functional area only
Non-elongated	Heavy bulky material which is not elongated
NSN	Navy Stock Number
NS	Naval Station
OSD	Over Short and Damage

TERMS AND ABBREVIATIONS (Continued)

Personal Fatigue Factor	Time during which no material handling functions are performed due to fatigue on the part of the equipment operators
PM (Preventive Maintenance)	The care and servicing by personnel for the purpose of maintaining system/equipment safety and reliability levels through systematic inspection, detection, lubrication, cleaning, etc.
PW or PWD	Public Works or Public Works Department
PWRMS	Pre-Positioned Ware Reserve Material Stock
Ripout	Material which has been removed from a ship for repair
Scheduled Maintenance	Periodic prescribed inspection and/or servicing of equipment accomplished on a calendar, mileage, or hours of operation basis
SPCC	Ships Parts Control Center

ABSTRACT

The three computer models described in this user's manual simulate the use of material handling equipment (MHE) at three distinct types of U.S. Navy installations (Main Supply, Ship Overhaul, and Weapons Supply). Input consists of data describing operational characteristics of the MHE, material delivery data for cargo arrivals, and issue document specifications.

Model output is composed of computer generated data describing MHE utilization and throughput data which tabulates the movement of cargo within this system as a function of time. The model output is designed to assist an analyst in the determination of specific MHE utilization requirements for any given U.S. Navy installation.

An analysis of sample simulation run results is also included in the report.

ADMINISTRATIVE INFORMATION

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1. INTRODUCTION

The Logistics Division (Code 187) of the David Taylor Research Center (DTRC), under the funding and direction of the Naval Supply Systems Command (Code 0622), has developed a set of three computer simulation models. These models were developed to simulate the operations and procedures employed in material handling and processing at each of three types of U.S. Navy installations, particularly in the utilization of material handling equipment (MHE). By exercising the models an analyst can determine the most effective use of MHE to be assigned to any particular installation.

Separate sections of this report show an MHE manager/user how to run the simulation models and how to interpret the output. Appendixes A, B, and C contain the input and output for one sample run of each model.

The models are written in the General Purpose Simulation System (GPSS) language and are presently operational on the CDC Cyber computer system at DTRC. GPSS was the language of choice for the coding of these models because its features are directly applicable to discrete stochastic modeling, as called for in this case.

The simulation models described in this report are not optimization models. An optimization model calculates for the user the optimal (best) solution to the problem; such a model is mathematical and not a simulation.

An analysis of sample simulation run results is also included in this report. The objective of this analysis is to offer the MHE system manager/user, without

2. OVERVIEW OF THE SIMULATION MODELS

This section provides a brief overview of each of the three simulation models. The MHE considered in these models includes the following types:

- container handlers
- 4K forklifts
- 6K forklifts
- heavy forklifts (equal to or greater than 10K)
- 4K cranes
- 6K cranes
- heavy cranes (equal to or greater than 10K)
- 4K sideloaders
- 30K sideloaders
- straddle trucks

The material handling operations and procedures underlying the defining logic for the models are further described by Chesley and Siegel.*

2.1 MAIN SUPPLY SIMULATION MODEL

The Main Supply simulation model depicts all cargo handling operations and procedures involving material handling equipment (MHE) at a general supply activity, such as the Naval Supply Center at Charleston, South Carolina. Figure 1 shows the names and relationships of representative MHE Main Supply activity processes (as described by Chesley and Siegel).*

The simulation logic describes the arrival of cargo from off base, the unloading of the cargo from the transporting vehicle, and the subsequent movement of the cargo to various destinations. It also describes the issuing of cargo (via issue documents) and the subsequent movement of the cargo through the system to the designated on-base or off-base recipients. Cargo originating from tenants to be packaged and shipped to off-base recipients is also included.

All 4k and 6k forklifts utilized in this model may be assigned by function or may be shared by different functions. Forklifts shared by two or more functions are termed community forklifts.

Factors representing equipment down time and personal fatigue time are included in this model.

2.1.1 *Receiving*

Trucks arrive at Receiving throughout each day carrying specified types and amounts of cargo. Trucks carrying cargo types "food and food only" and "bulky and only bulky, including hazardous" are routed directly to the warehouse. All other cargo, consisting of light bulky/boxes (in the form of pallets), is unloaded from the trucks at Receiving by forklifts and moved to Temporary Location. Pallets designated for storage are then moved again by forklifts to Temporary Staging (Receiving) or to the warehouse via an automated system.

* Chesley, James C. and Benjamin Siegel, "Material Handling Equipment Allowance, Maintenance, and Management Methodology Project: Task 1 — Descriptions of Required Material Handling Processes," DTNSRDC Report 85/084 (Jan 1986).

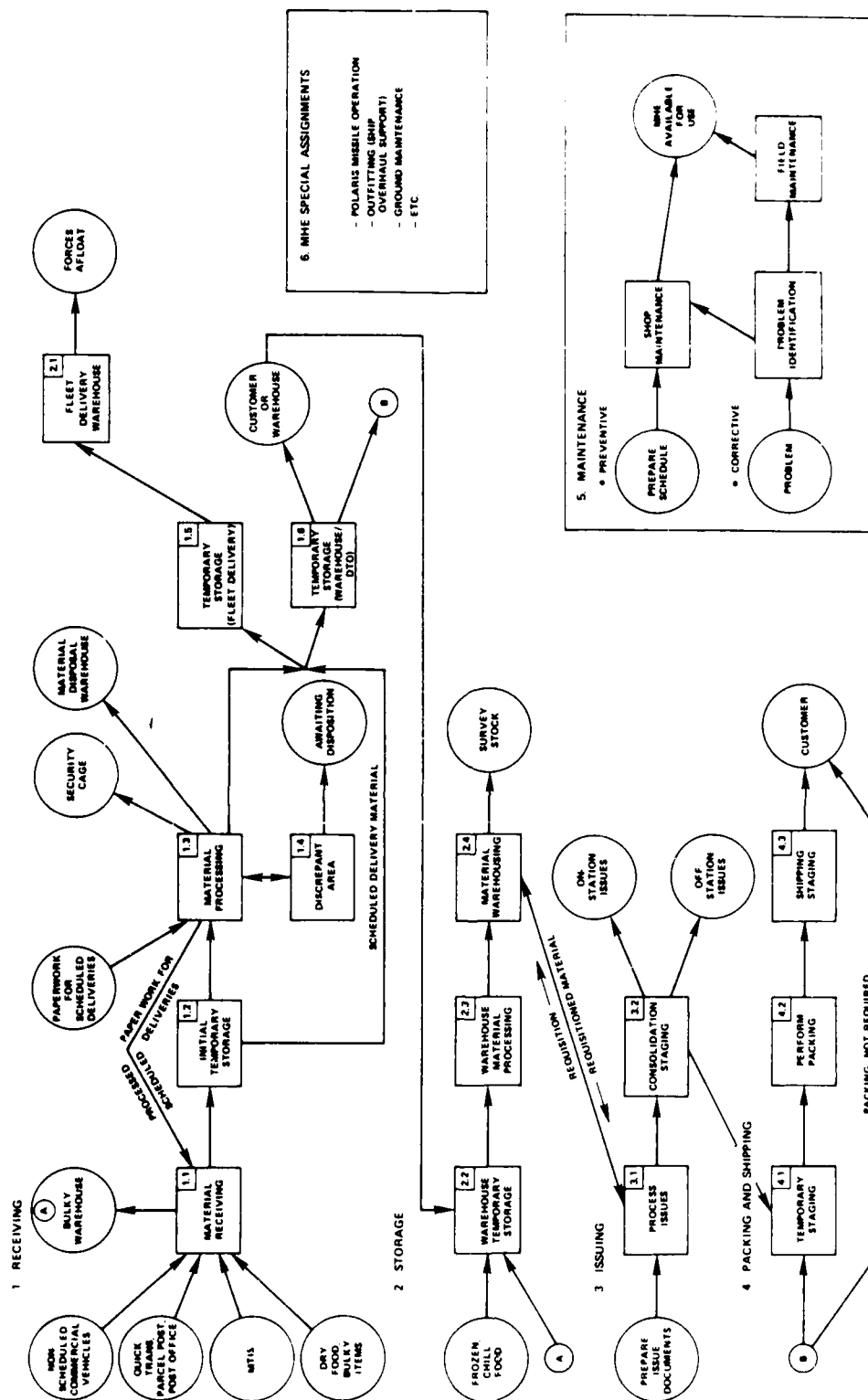


Fig. 1. NSC (Charleston) material handling system functional flow.

Pallets designated for transshipment are moved by forklifts from Temporary Staging (Receiving) to Temporary Staging (Packing and Shipping).

Pallets designated for Direct Turnover (DTO) are moved directly from Temporary Staging (Receiving) to DTO by flatbed trucks or straddle trucks.

Pallets designated for storage are moved from Temporary Staging (Receiving) to warehouse Temporary Storage by flatbed trucks or straddle trucks.

2.1.2 Storage

Non-food pallets designated for storage arrive at warehouse Temporary Storage via straddle trucks or flatbed trucks. Forklifts are then utilized to move the pallets from warehouse Temporary Storage to Material Warehousing (storage in bins).

After appropriate paperwork is implemented, trucks carrying "food and food only" pallets are routed from Receiving directly to warehouse Temporary Storage, where the cargo is offloaded by forklifts and moved to Material Warehousing.

Similarly, trucks carrying heavy bulky items arrive at warehouse Temporary Storage after being directly routed there from Receiving. If the heavy bulky cargo is "elongated to go into warehouse," it is unloaded by a crane and moved to Material Warehousing by a sideloader. If the heavy bulky cargo is "non-elongated to go into warehouse," it is unloaded by a crane and moved to Material Warehousing by a heavy forklift. If the heavy bulky cargo is to be stored outside the warehouse, it is unloaded with a crane and deposited directly at the appropriate storage location.

2.1.3 Issuing

The issuing of material is initiated by the arrival of an issue document at the warehouse. An issue document specifies the type, amount, and destination of material to be released from the warehouse.

2.1.3.1 Pallets. If the issue material is in the form of pallets, the pallets are moved from Material Warehousing to Consolidation Staging (Issuing) by either forklifts or an automated system (if available). The pallets are then moved from Consolidation Staging (Issuing) to Temporary Staging (Packing and Shipping) via flatbed trucks or straddle trucks.

2.1.3.2 Heavy Bulky for Off-Station. If the material to be issued is "elongated to be removed from within the warehouse," a sideloader is used to move the cargo from Material Warehousing to Consolidation Staging (outside warehouse), where it is then packed and packaged. A crane is then utilized to load the cargo onto the customer trucks.

If the material to be issued is "non-elongated to be removed from within the warehouse," a heavy forklift is used to move it from Material Warehousing to Consolidation Staging (outside warehouse), where it is then packed and packaged. A crane is then utilized to load the cargo onto the customer trucks.

If the material (elongated or non-elongated) to be issued is currently stored outside the warehouse, it is packed and packaged and then loaded by a crane onto the customer trucks.

2.1.3.3 *Heavy Bulky for On-Station.* If the material to be issued is "elongated to be removed from within the warehouse," a sideloader is used to move the cargo from Material Warehousing to Consolidation Staging (outside warehouse). A crane is then used to load the cargo onto trucks for the on-station user.

If the cargo to be issued is "non-elongated to be removed from within the warehouse," a heavy forklift is used to move it from Material Warehousing to Consolidation Staging (outside warehouse). A crane is then used to load the cargo onto trucks for the on-station user.

If the material to be issued is currently stored outside the warehouse, it is loaded by a crane onto trucks for the on-station user.

2.1.4 *Packing and Shipping*

Trucks carrying palletized cargo arrive at Packing and Shipping from both tenants and warehousing (issued material). The pallets are unloaded from the trucks by forklifts and moved to temporary staging (Packing and Shipping). The pallets are next moved by forklifts from Temporary Staging (Packing and Shipping) to Packing and Packaging (Packing and Shipping). The pallets are then packed and packaged and moved by forklifts from Packing and Packaging (Packing and Shipping) to Shipping Staging (Packing and Shipping). Pallets destined for off-station users are loaded onto trucks by forklifts. Pallets destined for on-station users may be loaded by forklifts onto trucks for delivery or may be delivered by straddle trucks (which require forklifts to line up the pallets prior to pickup).

2.2 WEAPONS SUPPLY SIMULATION MODEL

The Weapons Supply simulation model depicts the arrival at a Weapons Department of incoming shipments of cargo (inert and/or live explosive) and the subsequent movement and storage of such cargo within the system. The model also describes the issuing of material required for Weapons Consolidation, the process of weapons buildup, and the delivery of these weapons to on-base or off-base users. The Naval Air Station at Cecil Field, Florida, is an example of an activity whose Weapons Department may be simulated by this model. Figure 2 shows the names and relationships of representative MHE Weapons Supply activity processes (as described by Chesley and Siegel.)

Factors representing equipment down time and personal fatigue time are included in the Weapons Supply simulation model.

All types of MHE utilized in this model are assigned by function only (except straddle trucks).

2.2.1 *Receiving*

2.2.1.1 *Weapons Material Receiving.* All incoming inert material is delivered by trucks at Weapons Material Receiving. The trucks arrive throughout each day carrying the user-specified types and amounts of cargo. Forkliftable cargo is offloaded with the use of forklifts. Forkliftable cargo to be stored inside the warehouse will then be moved there via forklift. Non-forkliftable cargo is offloaded with a crane. Non-forkliftable cargo to be stored inside the warehouse will then be moved there by a sideloader.

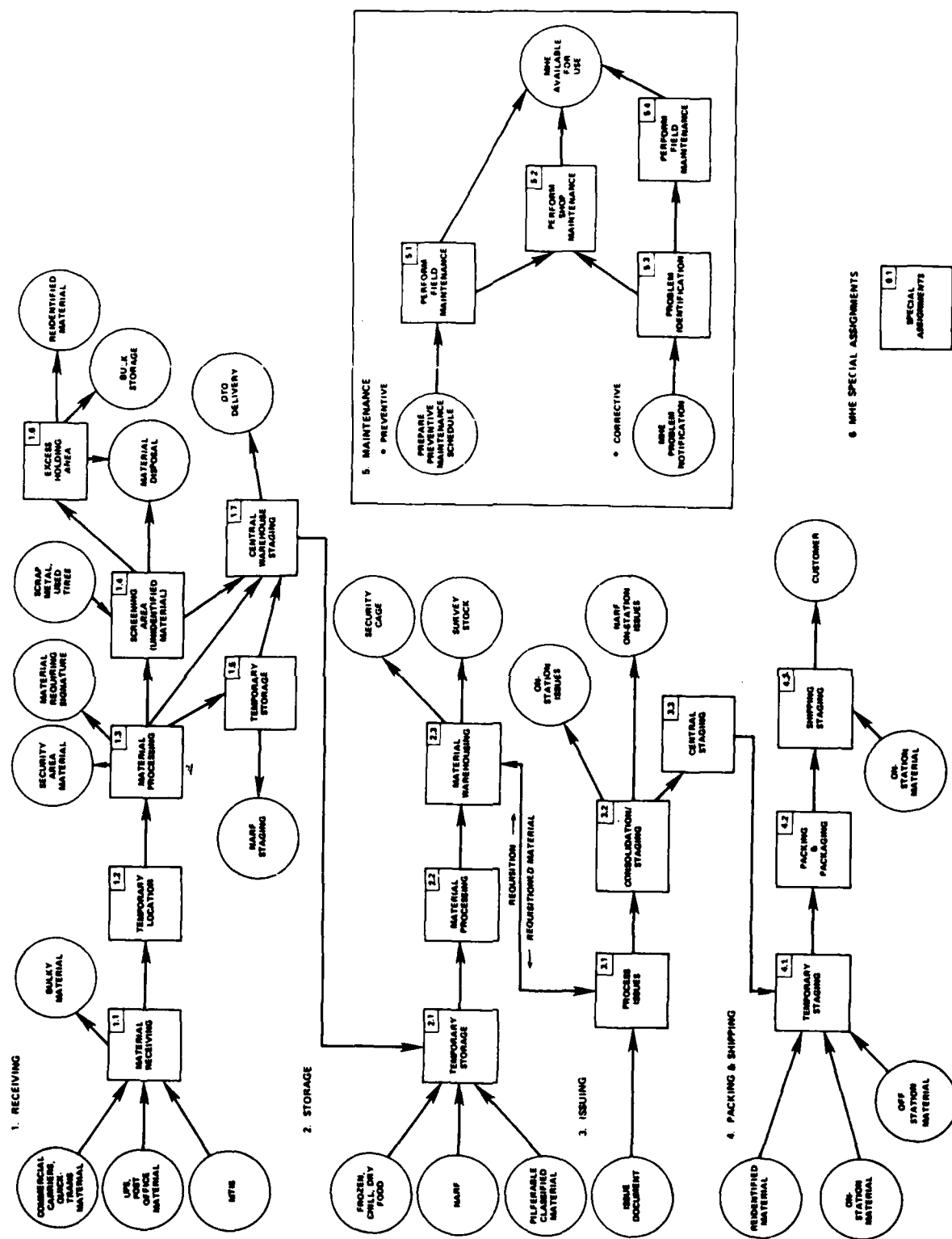


Fig. 2. NAS (Pensacola) material handling system functional flow.

2.2.1.2 Hot Cargo Area/Office. All incoming live explosive material is delivered by trucks at the Hot Cargo Area/Office. Forkliftable loads are offloaded with the use of forklifts (acquired from Weapons Material Receiving location) and loaded onto a different truck for transit, along with a forklift, to the magazine area. Upon arrival at the magazine area the forklift offloads the forkliftable loads and stores them in the magazines. Non-forkliftable cargo is offloaded by a crane, moved by a sideloader to the magazine area, and stored inside the magazines.

2.2.2 Issuing

2.2.2.1 Inert Bulk for Off-Station. Issue documents specifying bulk material (palletized) destined for off-station users arrive at the Inert Office (Inert Warehouse) at the user-specified times.

If the Inert Warehouse is adjacent to Packing and Shipping, the specified pallets are moved by forklifts to Temporary Staging (Packing and Shipping Area). They are then packed and packaged and loaded by forklifts onto trucks.

If the Inert Warehouse is not adjacent to Packing and Shipping, the specified pallets are moved by forklifts to Temporary Staging (Inert Warehouse). They are then loaded by forklifts onto trucks and taken to Packing and Shipping (Weapons Assembly Area). The pallets are then offloaded from the trucks by forklifts, packed and packaged, and loaded onto trucks by forklifts for transit to the off-station user.

2.2.2.2 Live Explosive Bulk for Off-Station. Issue documents specifying live explosive bulk material (palletized) destined for off-station users arrive at the Hot Cargo Area/Office at the user-specified times. A forklift is sent (from Weapons Material Receiving location) to the magazine area where it moves the pallets from the magazine to Temporary Staging (at magazine). The forklift loads the pallets onto a truck for transit to Packing and Shipping (adjacent to Weapons Assembly Area). The truck and the forklift transit to Packing and Shipping. The forklift then unloads the truck. The pallets are packed and packaged and loaded onto trucks for delivery to the off-station user.

2.2.2.3 Inert Material for Weapons Assembly. Issue documents specifying inert material to be used in the weapons assembly process arrive at the Inert Weapons Warehouse. If the specified loads are forkliftable, they are moved to the Bomb Buildup Area by either a truck or a straddle truck. Forklifts are utilized in loading and unloading the truck and in lining up the pallets for the straddle truck. Non-forkliftable loads are moved to the Bomb Buildup Area by a sideloader.

2.2.2.4 Live Explosives for Weapons Assembly. Issue documents specifying live explosives to be used in the weapons assembly process arrive at the Hot Cargo Area/Office.

If the specified material is forkliftable, a truck and forklift are sent to the magazines (from Weapons Material Receiving location) and the pallets are loaded onto the truck. The truck and forklift next transit to the Bomb Buildup Area

where the pallets are unloaded from the truck. The truck and forklift then return to Inert Receiving.

If the specified material is non-forkliftable, a sideloader is sent from the Hot Cargo Area to the magazines to move the material from the magazines to the Bomb Buildup Area.

2.2.3 *Delivery of Consolidated Weapons*

After assembly at the Bomb Buildup Area the consolidated weapons are delivered to the specified on-station or off-station users.

2.2.3.1 *Delivery to On-Station Users.* Forkliftable weapons are delivered to on-station users via truck or straddle truck. For truck deliveries the weapons are loaded onto the truck by a forklift. For straddle truck deliveries, a forklift is used to line up the pallets for the straddle truck.

Non-forkliftable weapons are delivered to on-station users via truck or sideloader. For truck deliveries a crane is used to load the weapons onto a truck.

2.2.3.2 *Delivery to Off-Station Users.* Forkliftable weapons are moved by forklift to Packing and Shipping, where they are packed and packaged, then loaded onto trucks.

Non-forkliftable weapons are moved by sideloader to Packing and Shipping, where they are packed and packaged, then loaded by crane onto trucks.

2.3 SHIP OVERHAUL SIMULATION MODEL

The Ship Overhaul simulation model depicts the use of MHE in support of the overhaul of a ship at a naval shipyard. The processes supported by MHE include the cutting of holes in the ship hull, the offloading from the ship of all material needing rework/replacement, the movement of the material to the appropriate repair shops, the the accomplishment of the required parts overhaul. Emphasis is placed on the usage of MHE throughout these processes; therefore all pertinent MHE statistics are compiled and printed out. The Norfolk Naval Shipyard at Portsmouth, Virginia, is an example of a shipyard whose activities may be simulated by this model. Figure 3 shows the names and relationships of representative MHE Ship Overhaul activity processes (as described by Chesley and Siegel.)

Factors representing equipment down time and personal fatigue time are included in the Ship Overhaul simulation model.

2.3.1 *Prearrival Staging*

Ship prearrival times are specified by the user. Prior to each ship's arrival (prearrival) there will be a staging of Temporary Services near the pier. The Temporary Services palletized loads to be staged near the pier will be transferred by forklift. If there are heavy bulky loads to be staged, they will be loaded by a crane onto a truck. The truck will then transit to near the pier where the heavy bulky items are unloaded from the truck by crane.

The Temporary Services are next staged onto the pier. Palletized loads are transferred by forklift from near the pier onto the pier. Heavy bulky loads are moved by crane from near the pier onto the pier.

2.3.2 Ship Arrival

Upon ship arrival the Temporary Services must be connected to the ship. All Temporary Services material contained in the palletized loads is connected to the ship with the support of forklifts. Similarly, all Temporary Services heavy bulky loads are connected to the ship with the support of a crane.

2.3.3 Ripout

After connection of the Temporary Services, ripout is performed to remove from the ship the material to be sent to the repair shops. All ripout material from the upper deck is transferred by a crane to the pier (Temporary Location).

It is often necessary to cut holes in the ship hull prior to the removal of ripout material from the lower deck. Forklifts are generally utilized as working platforms in support of this operation, transferring palletized ripout material from the lower deck to the pier (Temporary Location). Heavy bulky ripout items are transferred from the lower deck to the pier (Temporary Location) with the support of a crane.

All palletized ripout items are next transferred from Temporary Location (pier) to Temporary Staging (pier) by forklifts. Pallets less than or equal to 6,000 pounds are then moved by forklifts from Temporary Staging (pier) to inside the repair shops. Pallets greater than 6,000 pounds may either be moved from Temporary Staging (pier) to inside the repair shops by heavy forklifts or be loaded by heavy forklifts onto flatbed trucks for transfer to a deposit point outside the repair shops. They are then moved by heavy forklifts to inside the repair shops. Straddle trucks may also be used in moving pallets from Temporary Staging (pier) to a deposit point outside the repair shops.

Heavy bulky ripout items at Temporary Location (pier) are loaded by crane onto flatbed trucks and transferred to delivery points outside the repair shops. They are unloaded there with a crane. Elongated heavy bulky ripout items are moved from outside to inside the repair shops with a sideloader. Non-elongated heavy bulky ripout items are moved from outside to inside the repair shops with a heavy forklift.

2.3.4 Repair Shops

Repair work on ripout items is accomplished at the repair shops with the support (utilization) of the various types of MHE equipment. Forklifts are utilized in the repair of palletized ripout items. Sideloaders and cranes are utilized in the repair of heavy bulky elongated ripout items. Heavy forklifts are utilized in the repair of heavy bulky non-elongated ripout items.

2.4 ASSUMPTIONS

The following assumptions were made during development of the three MHE simulation models:

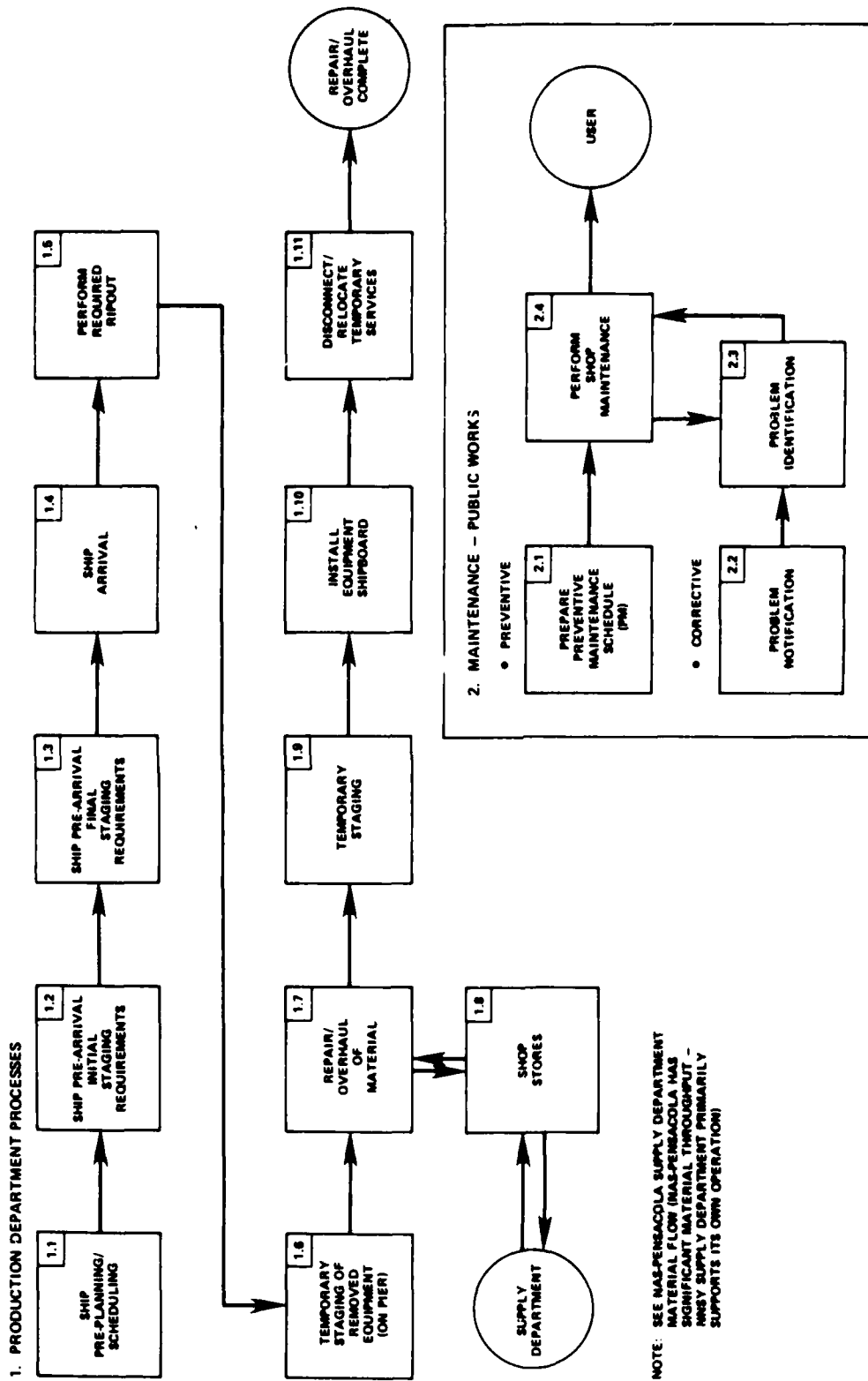


Fig. 3. NNSY material handling system functional flow.

1. Each forklift can carry one and only one pallet at a time.
2. Each crane can move one and only one heavy bulky item at a time.
3. Each sideloader can transport one and only one heavy bulky item at a time.
4. Each heavy forklift can carry one and only one heavy bulky load (to be warehoused) at a time.
5. The length of a working day is eight hours. This value may be changed by the user.
6. All MHE is unavailable for use for a portion of each working day due to equipment down time and personal fatigue factors. The MHE unavailability is different for each model. For the Main Supply model, the MHE is unavailable for 2 hours of each day. For the Weapons Supply model, the MHE is unavailable for 96 minutes of each day. For the Ship Overhaul model, the straddle trucks and the forklifts at the pier area are unavailable for 163 minutes of each day; the MHE at the repair shops is unavailable for 203 minutes of each day; and the large crane at the pier area is unavailable for 72 minutes of each day. These values may be changed by the user.
7. Flatbed trucks are always available.
8. All models are based on the central warehouse with one average distance between the warehouse and the Receiving and Packing and Shipping functional locations on the base.
9. The Ship Overhaul model considers only the ripout and repair phases of the overhaul procedure and not the reinstallation of the repaired parts into the ship. Statistics for the overall operation may be obtained by doubling the output data from the model run.

3. HOW TO RUN THE MODELS

The Main Supply computer simulation model, the Weapons Supply simulation model, and the Ship Overhaul simulation model are all currently resident on the mass storage device of the CDC Cyber computer system at DTRC. The models are run interactively through a VT100-compatible tabletop terminal. Small letters and capital letters are interchangeable in communicating with the CDC Cyber.

3.1 LOGIN PROCEDURE

The user first dials the number 73000 (for on-base users) or (202) 227-3000 (for commercial off-base users) to access the Cyber. Then the user executes the login procedure:

login,LOGINID,sup	<return>
ACCESS NUMBER	<return>
TURNKEY PASSWORD	<return>

The LOGINID and ACCESS NUMBER are provided to the user by the designated personnel of the Computations, Mathematics and Logistics Department (CMLD) at DTRC. The TURNKEY PASSWORD is supplied by the user.

An example of the login procedure might be

```
login,cabrpaulbr,sup      <return>
amrts18743                <return>
gasline                   <return>
```

where "cabrpaulbr" is the LOGINID, "amrts18743" is the ACCESS NUMBER, and "gasline" is the TURNKEY PASSWORD.

3.2 MODEL EXECUTION

When the login procedure is complete, the user executes the command sequence required for the actual execution of the simulation model:

```
attach, gpss              <return>
attach, netedf            <return>
attach,aaa,MODELNAME,id = USERID  <return>
netedf,aaa               <return>
      USER SUPPLIED DATA CHANGES
save,bbb                 <return>
gpss,i=bbb,fx            <return>
route,output,dc=pr,tid=c,fid=*USERID  <return>
logout                   <return>
```

In this instruction sequence the MODELNAME is selected by the user and will be KMHEXX for the Main Supply simulation model; KWPNNXX for the Weapons Supply simulation model; and KSPOXX for the Ship Overhaul simulation model. The output from the run may be subsequently retrieved from the Dispatch Office at CMLD. A minor modification of the "route" instruction enables the user to print the output at his own installation.

An example of the model execution sequence might be:

```
attach,gpss              <return>
attach,netedf            <return>
attach,aaa,kmhexx,id = cabr  <return>
netedf,aaa               <return>
l flba s                 <return>
c/16/20/                 <return>
save bbb                 <return>
gpss,i=bbb,fx            <return>
route,output,dc=pr,tid=c,fid=*cabr  <return>
logout                   <return>
```


straddle truck can carry, etc. These values are changed in the same manner as the values defining the numbers of MHE equipment.

4.3 MATRIX DATA

The data supplied for matrices TBLA and TBLB for each of the models describe cargo deliveries (schedules, types, amounts) and issue documents (arrival times, types and amounts of material to be issued). The Weapons Supply model also contains the MWPB data matrix, which contains data relevant to the consolidation of weapons at the Bomb Buildup Area. The definitions for TBLA and TBLB data are found in cards 272-409 of the Main Supply model and cards 158-187 of the Ship Overhaul model. The definitions for TBLA, TBLB, and MWPB are found in cards 285-380 of the Weapons Supply model. The actual data for TBLA and TBLB are defined in cards 690-762 of the Main Supply model and cards 391-402 of the Ship Overhaul model. The actual data for TBLA, TBLB, and MWPB are defined in cards 687-733 of the Weapons Supply model.

Data contained within matrices are defined by specifying the matrix name, the row number, the column number, and the value of the data. KWPBXX (Appendix B) is used here for illustrative purposes. On card 697 of KWPBXX, TBLA(1,1) is set equal to 0, and TBLA(2,1) is set equal to 2. The prefix "MHS" must always be used. Either one or two matrix data definitions may be used on one line. When two are used, they are separated by a slash. Card 721 illustrates only one matrix data definition on a line.

It is also possible to define more than one data element at a time (i.e., with a single data definition). For example, card 703 defines TBLA(3,2), TBLA(4,2), TBLA(5,2) and TBLA(6,2) all to be set equal to 3.

In defining data contained within matrices, it is sometimes necessary to add and/or delete one or more lines of coding. To delete lines of coding, substitute the following sequence of instructions for the phrase "USER SUPPLIED DATA CHANGES" in the instruction sequence of Section 3.2:

```
1 initial (names of first data element to be deleted)      <return>
d(number of lines to be deleted)                            <return>
```

For example, to delete card 693 and card 694, use the instruction sequence

```
1 initial mh$tbla(1,7)                                     <return>
d2                                                         <return>
```

To add lines of coding, substitute the following sequence of instructions for the phrase "USER SUPPLIED DATA CHANGES" in the instruction sequence of Section 3.2:

```
1 initial (name of data element preceding data insertion)  <return>
.                                                         <return>
(lines of coding to be inserted)                          <return>
.                                                         <return>
```

For example, to set $TBLA(7,1) = 1$, $TBLA(7,2) = 2$, $TBLA(7,3) = 3$, and $TBLA(7,4) = 4$ after card 719, use the instruction sequence

```
1 initial      mh$tbla(3-6,14)          <return>
.              <return>
initial      mh$tbla(7,1),1/mh$tbla(7,2),2  <return>
initial      mh$tbla(7,3),3/mh$tbla(7,4),4  <return>
.              <return>
```

4.4 CATALOGING AND PURGING OF FILES

4.4.1 *Cataloging of New Files*

Each of the three simulation models contains a specific set of built-in input data. For each run to be made, the user modifies this data to describe the particular scenario to be examined. Often the user will wish to preserve a certain version of one of the models, defined by the inputs used in a given run. This may be accomplished by cataloging this version of the model as a new file. One additional command is required for this purpose. After saving the new version of the model with a "save" command, the user must execute the "catalog" command. A modification of the Section 3.2 example for this purpose might yield the following command sequence:

```
attach,gpss          <return>
attach,netedf        <return>
attach,aaa,kmhexx,id=cabr <return>
netedf,aaa          <return>
1 flba s            <return>
c/16/20/            <return>
save bbb            <return>
catalog,bbb,kmheyy,id=cabr <return>
gpss,i=bbb,fx       <return>
route,output,dc=pr,tid=c,fid=*cabr <return>
logout              <return>
```

In this example, the new file is named KMHEYY and may henceforth be accessed for model execution by use of the "attach" command.

4.4.2 *Purging of Old Files*

The user will occasionally wish to get rid of previous versions of the models which are of no further use. Any of these model versions (each existing as a separately stored and named file) may be deleted by use of the "purge" command. The format for the "purge" command is

```
purge,ppp,MODELNAME,id=USERID          <return>
```

To purge an unwanted file named KMHE444 the user may, for instance, expanding on the Section 3.1 example, utilize the following command sequence:

login,cabrpaulbr,sup	<return>
amrts18743	<return>
gasline	<return>
purge,ppp,kmhe444,id = cabr	<return>
logout	<return>

5. EXPLANATION OF OUTPUT

The output from a sample run of the Main Supply simulation model is found on pages 56-78 of Appendix A. This particular run simulates three days of actual Main Supply activity material handling. The statistical data are accumulated separately for each day; therefore, there are three sets of output data, each with the same format. The set of data described in this section represents one day of a simulation; for example, the data representing day 3 of the Main Supply simulation is found on pages 72-78 of Appendix A. The output format for the Weapons Supply model (Appendix B) and the Ship Overhaul model (Appendix C) is similar to that for the Main Supply model. For brevity, therefore, only the day 3 output for the sample runs of the Weapons Supply model and the Ship Overhaul model are included.

5.1 MHE EQUIPMENT USED

The first group of data (top of page 72, Appendix A) within this set defines the MHE equipment used. The equipment name, an abbreviated definition, and the corresponding card number (within the main program listing) for the complete equipment definition are given here.

5.2 MHE EQUIPMENT UTILIZATION

The second group of data (bottom of page 72, Appendix A) gives the MHE equipment utilization. There are eight columns, each with two headings. The second heading is automatically printed by the computer program. The first heading is provided to give the user more information. The first column gives the name of the MHE equipment per functional location. The second column gives the number of each type of MHE available for use. The third column gives the average number of each type of MHE equipment used during an eight-hour day. The fourth column gives the average utilization for each type of MHE; the utilization is for all MHE equipment of a given type and will take on a value between 0 and 1. The fifth column gives the total number of times that each type of MHE equipment was used during the day. The sixth column gives the average time (in minutes) that each piece of any of the MHE equipment types is used. The seventh column gives the number of each equipment type in use at the end of that day. The eighth column gives the maximum number of each MHE equipment type in use at one time during the day. The total number of pieces of MHE equipment is also printed out, along with the overall MHE equipment utilization.

5.3 SINGLE VALUED INPUT PARAMETERS

The third grouping of data (page 73, Appendix A) is a listing of the single-valued (not within a matrix) input parameters with the user-supplied values for

this particular run. Also given are the abbreviated definitions and the card numbers within the main program listing on which the complete definitions of these variables may be found.

5.4 MATRIX INPUT DATA

The fourth grouping (pages 74-76, Appendix A) lists data that are user-supplied and that define cargo delivery and issue document information (matrices TBLA and TBLB). In the Weapons Supply model, this grouping also contains matrix MWPB, which contains weapon consolidation data. Abbreviated definitions for these data are given in this grouping. The complete definitions are given within the main program listing at the indicated card numbers.

5.5 THROUGHPUT DATA

The fifth and final grouping (pages 77-78, Appendix A) of data consists of the throughput matrix AAA1. This is a tabulation of the movement of supplies (cargo) throughout the system on a day-by-day basis. Each row of matrix AAA1 contains the throughput data for one day of the simulation. Abbreviated versions of the applicable column definitions are given in this grouping. The complete definitions are given within the main program listing at the indicated card numbers.

6. SCREEN VIEWING AND EDITING OF OUTPUT

6.1 SCREEN VIEWING OF OUTPUT

In running any one of the three simulation models, the user will often be interested in only a limited quantity of the output data. In this case the user may elect to view the simulation output on the terminal screen rather than to obtain a printout. To view a selected portion of the simulation output on the screen, the user substitutes the following commands for the "route" instruction (next to last command) in the instruction sequence of Section 3.2:

screen,132	<return>
SET UP - 9 - SET UP	
netedf,output	<return>
l (first occurrence of desired string)	<return>
p (number of lines to be printed)	<return>

The instruction "SET UP - 9 - SET UP" consists of the hitting of three keys: first hit the "SET UP" keys; then hit the "9" key; then hit the "SET UP" key again.

As an example, to display the utilization statistics for day 3 of the Main Supply simulation, the following instruction sequence is used (the first instruction is applicable only to VT100-compatible terminals capable of displaying 132 characters per line):

screen,132	<return>
SET UP - 9 - SET UP	
netedf,output	<return>
l y 3	<return>
l util	<return>
p 25	<return>

The "l y 3" command moves the cursor to the line

"RESET	RESET FOR DAY 3",
--------	-------------------

card 2892, on page 71 (Appendix A). The "l util" command then moves the cursor to the line "MHE EQUIPMENT UTILIZATION" on page 72 of Appendix A. The "p 25" command then prints this line and the following 24 lines, displaying the complete utilization table upon the screen. It is sometimes necessary, as in the above example, to use more than one "l" command (here we used two: "l y 3" and "l util").

6.2 EDITING OF OUTPUT

Hardcopy output may be obtained by routing the simulation output to the printer with the "route" command, as shown in Section 3.2. However, this command sequence causes the entire output from the model execution to be printed. Often the user wants only a selected and limited amount of the total output to be printed. This may be accomplished by editing the output; that is, by deleting those portions of the total output not desired as hardcopy.

Deletion of selected portions of the output is accomplished by use of the two versions of the "delete" command. The "dtop" command removes from the output file everything preceding (but not including) the current line. The "dx" command deletes the present line and the following x-1 lines (for a total of x lines deleted).

For example, if the user wishes to print out only the day 3 output from a run of the Main Supply module, the following instruction sequence (a modification of the Section 3.2 example) is used:

attach,gpss	<return>
attach,netedf	<return>
attach,aaa,kmhexx,id=cabr	<return>
netedf,aaa	<return>
l flba s	<return>
c/16/20/	<return>
save bbb	<return>
gpss,i=bbb,fx	<return>
netedf,output	<return>
l y 3	<return>
dtop	<return>
l end	<return>
d 10000	<return>

save ccc	<return>
route,ccc,dc=pr,tid=c,fid=*cabr	<return>
logout	<return>

The "l y 3" command moves the cursor to card number 2889 (Appendix A, page 71). The "dtop" command then deletes everything preceding this line. The "l end" command moves the cursor to card number 2891. The "d 10000" command then deletes everything including and after line 2891. The number 10000 is used as an arbitrarily large number to ensure that the rest of the output file will be deleted. The "save ccc" command saves what is left of the file (card 2889 on page 71 through the bottom of page 78). The "route" command then sends this edited version of the output to the printer.

7. MHE ANALYSIS

7.1 OBJECTIVE

The objective of this analysis is to offer the MHE system manager/user the convenience of identifying the potential effects of adjustments of key parametric values on MHE utilization at Main Supply Activities without the necessity of running the MHE simulation module.

7.2 APPROACH

To fulfill the objective of this analysis, it is necessary to compare, vary, and analyze several key factors within the Main Supply material handling system. These factors include

- the functional locations (Receiving, Storage (includes Warehousing and Issuing), and Packing & Shipping) at which material handling is performed
- the MHE resources (types and numbers) used to perform the necessary tasks
- the material throughput (functional location inputs and outputs)
- the overall and functional MHE location utilization (in percentages)

The measures of effectiveness (MOEs) used as a basis for comparing and analyzing the results of alternative simulation runs are MHE utilization and throughput. The tool used in performing this analysis is the Main Supply simulation module.

The amounts of material handled and the numbers of MHE assigned to each functional location are varied in order to compare and analyze the resulting effects on utilization and material throughput. This is done for several activities that include NSC Charleston and those activities having the minimum (NSC Puget Sound) and maximum (NSC Norfolk) number of MHE assigned to their Main Supply functions.

These variations are performed for two situations: (1) MHE is distributed to and solely supports each assigned functional location (non-community). (2) the MHE assigned to Receiving and to Packing & Shipping is centrally located and is available to either, as required, from a common or community pool. The MHE located at the Storage functional location solely supports its material handling tasks.

7.3 DATA SOURCES

The quantitative data used to exercise the Main Supply simulation module were acquired from visits (personnel interviews and observations) to NSC Charleston and documentation acquired from Code 0302, Navy Ships Parts Control Center, Ashore Activity Verification and Allowance Listing, SPCC-5230/181 (Rev 1-87).

7.4 FORMATS

To present the key descriptive information and facilitate its comprehension, appropriate tabular formats (see Tables A.1/A.2 and B.1/B.2) were prepared for data presentation and analysis. Tabular format A.1/A.2 is used when adjustments solely to the number of MHE assigned per functional location (either community of non-community arrangements) are made to the Main Supply module inputs. Tabular format B.1/B.2 is used when adjustments solely to the amount of material (number of pallets) handled at all the functional locations are made to the Main Supply module inputs. Tables A.1 and B.1 are used for non-community MHE assignments; A.2 and B.2 are used for MHE community assignments.

The categories used are as follows:

Activity Name	NSC Charleston, Puget Sound or Norfolk
Functional Location	Receiving, Storage, Packing & Shipping, or Central*
Type of MHE	4k, 6k, 10k or larger forklifts, crane, sideloader or straddle truck
Number of MHE	numeric MHE value assigned to designated functional location
Percent Utilization	of each MHE type assigned to each designated functional location or community of functional locations
In/Out Throughput	values in terms of number of pallets to be handled at each designated functional location
Total Number of MHE	summary of all assigned and available MHE per Main Supply activity functional locations
Overall Utilization	based upon the average utilization of all MHEs operating in all the Main Supply functional locations
MHE Adjustment	percent MHE decrease relative to initial values/functional location
Material Inputs	increases in Received, Issued and Tenant material (pallets) inputs to the Main Supply system

* MHE available to all functional locations.

Table A.1. Non-community MHE adjustments.

Activity Name	Funct Loc	Type MHE	No. of MHE			Percent Utiliz.			Throughput			Out			Total No. of MHE			Overall Utiliz.			MHE Adjust (percent decrease)		
			a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
Charleston	Recv	4kfl	16	16	16	58	62	62	396	396	396	591	584	587	106	83	77	38	50	53	0	0	0
		P&S	19	15	10	31	42	58	273	281	277	295	277	260							0	24	48
	Stor	6kfl	6	4	3	33	45	59															
		4kfl	33	25	25	37	51	51	947	940	939	944	954	945							0	27	27
		6kfl	14	10	10	36	53	51															
		10kfl	2	1	1	3	5	5															
		Crane	1	1	1	75	75	75															
		SL	2	1	1	6	13	13															
		ST	13	10	10	42	46	49													0	30	30
		Central	10	10	10	60	60	60	198	198	198	297	297	297	57	48	42	43	50	58	0	0	0
		Puget Sound	11	8	6	36	47	65	139	159	135	165	165	161							0	21	43
		6kfl	3	3	2	44	46	68															
Norfolk	Recv	4kfl	20	17	15	44	54	62	534	534	534	538	534	537							0	18	27
		6kfl	8	6	5	45	54	61			3												
	Stor	10kfl	1	1	1	6	6	6															
		Crane	1	1	1	75	75	75															
		SL	3	2	2	3	5	5															
		ST	0	0	0																		
		Central	121	121	121	61	59	—	2706	2706	—	4159	4066	—	725	535	—	40	49	—	0	0	—
		Puget Sound	137	77	77	31	50	—	1933	1933	—	1837	1972	—							0	44	—
		6kfl	45	25	—	31	49	—															
		4kfl	248	186	—	38	50	—	6567	6585	—	6494	6584	—							0	28	—
		6kfl	105	70	—	37	51	—															
		10kfl	26	13	—	3	5	—															
Norfolk	Recv	4kfl	13	13	13	75	71	—															
		P&S	2	2	2	48	50	—															
	Stor	SL	28	28	28	71	66	—													0	0	—
		ST	28	28	28	71	66	—															
		Central	121	121	121	61	59	—	2706	2706	—	4159	4066	—	725	535	—	40	49	—	0	0	—
		Puget Sound	137	77	77	31	50	—	1933	1933	—	1837	1972	—							0	44	—
		6kfl	45	25	—	31	49	—															
		4kfl	248	186	—	38	50	—	6567	6585	—	6494	6584	—							0	28	—
		6kfl	105	70	—	37	51	—															
		10kfl	26	13	—	3	5	—															
		Crane	13	13	13	75	71	—															
		SL	2	2	2	48	50	—															

Table A.2. Community MHE adjustments.

Activity Name	Funct Loc	Type MHE	No. of MHE			Percent Utiliz.			Throughput			Out			Total No. of MHE			Overall Utiliz.			MHE Adjust (percent decrease)		
			a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
Charleston	Recv/ P&S	4kfl	35	31	26	40	50	60	680	682	685	886	872	840	106	83	77	38	49	53	0	15	29
		6kfl	6	4	3	55	61	67															
	Stor	4kfl	33	25	25	38	51	52	950	961	949	962	962	953							0	27	27
		6kfl	14	10	10	37	51	51															
		10kfl	2	1	1	3	5	5															
		Crane	1	1	1	75	75	75															
		SL	2	1	1	6	13	13															
Puget Sound	Recv/ P&S	4kfl	21	18	16	44	51	57	357	351	358	445	463	453	57	48	42	38	50	57	0	13	21
		6kfl	3	3	3	57	60	63															
	Stor	4kfl	20	17	15	44	53	61	530	538	538	533	519	532							0	18	33
		6kfl	8	6	5	45	56	63															
		10kfl	1	1	1	6	6	6															
		Crane	1	1	1	75	75	75															
		SL	3	2	1	3	5	10															
Norfolk	Recv/ P&S	4kfl	258	200	—	40	53	—	4469	4642	—	6003	5971	—	725	562	—	40	52	—	0	21	—
		6kfl	45	40	—	56	62	—															
	Stor	4kfl	248	186	—	39	52	—	6590	6548	—	6625	6735	—							0	25	—
		6kfl	105	80	—	39	51	—															
		10kfl	26	13	—	3	5	—															
		Crane	13	13	—	75	75	—		5													
		SL	2	2	—	48	48	—															
Central	ST		28	28	—	70	68	—	—	—	—	—	—	—							0	0	—

Table B.1. Non-community material adjustments.

Activity Name	Funct. Loc	Type MHE	No. of MHE	Percent Utiliz			Throughput			Out	Total No. of MHE			Overall Utiliz.			Material Inputs (Pallets)		
							In												
				a	b	c	a	b	c		a	b	c	a	b	c	a	b	c
Charleston	Recv	4kfl	16	58	71	75	396	484	594	591	717	725	106	38	45	53	504	622	765
																			Received
																			Issued
		4kfl	19	31	38	44	273	338	380	295	347	423					500	600	800
																			Tenants
																	24	32	40
	Stor	4kfl	33	37	43	60	947	1160	1428	944	1152	1379					1028	1254	1605
																			Summary
	Central	Crane	1	75	75	75													
		SL	2	6	6	6													
		ST	13	42	55	38													
Puget Sound	Recv	4kfl	10	60	73	76	198	242	286	297	363	323	57	43	53	60	261	311	379
																			Received
																			Issued
	P&S	4kfl	11	36	49	56	139	208	256	165	216	264					300	400	500
																			Tenants
									6								12	15	18
	Stor	4kfl	20	44	55	65	534	678	781	538	669	793					573	726	897
																			Summary
	Central	Crane	1	75	75	75													
		SL	3	3	3	3													
		ST	0	0	0	0													
Norfolk	Recv	4kfl	121	61	76	75	2706	3344	3960	4159	4663	3957	725	40	49	55	3453	4250	5130
																			Received
																			Issued
	P&S	4kfl	137	31	39	49	1933	2455	2896	1837	2459	3191					3500	4500	5500
																			Tenants
																	164	200	280
	Stor	4kfl	248	38	47	55	6567	8030	8871	6494	7804	8995					7117	8950	10910
																			Summary
	Central	Crane	13	75	75	76													
		SL	2	48	48	48													
		ST	28	71	68	68													

Table B.2. Community material adjustments.

Activity Name	Funct. Loc	Type MHE	No. of MHE	Percent Utiliz			Throughput			Out			Total No. of MHE	Overall Utiliz			Material Inputs (Pallets)		
				a	b	c	a	b	c	a	b	c		a	b	c	a	b	c
Charleston	Recv/ P&S	4kfl	35	40	52	65	680	826	1038	886	1046	1295	106	38	47	59	504	622	765
		6kfl	6	55	60	71											500	600	800
	Stor	4kfl	33	38	47	60	950	1148	1488	962	1159	1459					24	32	40
		6kfl	14	37	45	61													
		10kfl	2	3	3	3													
	Central	Crane	1	75	75	75													
		SL	2	6	6	6													
Puget Sound	Recv/ P&S	4kfl	21	44	57	70	357	450	542	445	565	695	57	42	53	64	261	311	379
		6kfl	3	57	66	73											300	400	500
	Stor	4kfl	20	44	56	69	530	678	838	533	673	838					12	15	18
		6kfl	8	45	56	69													
		10kfl	1	6	6	6													
	Central	Crane	1	75	75	75													
		SL	3	3	3	3													
Norfolk	Recv/ P&S	4kfl	258	40	53	66	4469	5892	6862	6003	7556	9230	725	40	50	61	3453	4250	5130
		6kfl	45	56	65	71											3500	4500	5500
	Stor	4kfl	248	39	49	61	6590	8295	10274	6625	8147	9776					164	200	280
		6kfl	105	39	49	61													
		10kfl	26	3	3	3													
	Central	Crane	13	75	75	75													
		SL	2	48	48	48													

7.5 ANALYSIS

The following tables represent the average daily (8 hours) simulated interrelationships of MHE and material (pallets and heavy bulky) performed by the NSC Puget Sound, NSC Charleston, and NSC Norfolk Main Supply functions.

The material and MHE baseline data used for Charleston were based on discussions with knowledgeable personnel and on time and motion data acquired while visiting that activity. The MHE baseline data used for NSC Puget Sound and NSC Norfolk were extracted from the Navy Ships Parts Control Center, Ashore Activity Verification and Allowance Listing, SPCC-5230/181 (Rev 1-87). The baseline data used for Puget Sound and Norfolk are proportional to their amounts of MHE in relation to those of Charleston and were developed from Charleston's amount of baseline material.

The data exhibited in these tables represent variations in numbers of MHE (decreases) assigned to functional locations (Tables A.1 and A.2) and to the amounts of material handled by MHE (increases) at each of the functional locations (Tables B.1 and B.2). Tables A.1 and B.1 represent non-community MHE functional assignments. Tables A.2 and B.2 represent community functional assignments. The data under the letters a, b, and c are taken from the initial and ensuing simulation runs.

7.6 RESULTS

7.6.1 *Decreased MHE Availability*

7.6.1.1 *Non-community.* MHE reductions were implemented at all but the Receiving functional locations. This reduction was due to the relatively high MHE utilization values (compared to those of the other functional locations) that already existed at each activity, Receiving function. Reductions in the numbers of assigned MHE as simulation inputs were substantial (see Tables A.1 and A.2).

- (a) Material Throughput — The reduced numbers of MHE assigned to the activity functional locations for the various simulation runs caused minimal to no effect on restricting the flow of material within and between functional locations.
- (b) MHE Functional Location Utilization — As the numbers of MHE were decreased, the percent of MHE utilization increased by a proportional amount for all the activities' functions. There was minor (at Norfolk) to no deviation from this inversely proportional relationship.
- (c) Overall MHE Utilization — The overall decrease in the number of MHE compared to the percent of MHE utilization held true for the Main Supply Systems of all the activities.

7.6.1.2 *Community.*

- (a) Material Throughput — The effects of decreasing the numbers of MHE on activity functional location throughput input and output values were very minor.
- (b) MHE Functional Location Utilization — The decrease in numbers of MHE was proportional to the increase in MHE utilization per

functional location for all the activities. There was a small variation from this correspondence at Norfolk's Packing and Shipping functional location.

- (c) Overall MHE Utilization — The inverse proportional relationship between the overall numbers of MHE assigned and MHE utilized held true for all the activities' Main Supply Systems.

7.6.1.3 *Non-community vs. Community Comparisons.*

- (a) Material Throughput — The non-community and community MHE arrangements were compared by summing the Receiving and Packing and Shipping functional throughput input values. This same comparison was made for the material throughput output values. No significant differences were noted between the MHE non-community and community arrangements.
- (b) MHE Functional Utilization — The differences between the non-community and community MHE assignments were found at their Receiving and Packing and Shipping functional locations. For either arrangement a decrease in the numbers of MHE resulted in a corresponding increase in the percent of utilization of MHE; therefore, a comparative analysis was performed in the following steps:
 - For each non-community simulation run, the product of the number of MHE and its associated percent of MHE utilization was determined, first for the Receiving and then for the Packing and Shipping functions.
 - These two values were added, giving a cumulative Receiving/Packing and Shipping MHE utilization.
 - For each community simulation run, the products of the number of MHE assigned to the common Receiving/Packing and Shipping pool and the associated percent of MHE utilization was determined.
 - These non-community and community MHE utilization values (for the same activity and levels of assigned MHE) were compared. No significant differences were found.
- (c) Overall MHE Utilization — The products of the overall number of assigned MHE and overall percent of utilization were determined for each pair of corresponding activity simulation runs. No significant differences were found.

7.6.2 *Increased Material Inputs*

The effects of increased amounts of material to be handled by an activity could be of major concern. These variations might be due to changes in mission assignment or contingency level.

Material adjustments were made solely to the numbers of pallets because they made up approximately 90% of the total amount of material handled by the activities. Adjusted material inputs were categorized as follows:

Received — Inputs coming into the activity from outside the Main Supply System, including material coming into the Receiving functional location for handling and material going directly to Storage (after the processing of the

associated paperwork at the Receiving functional location).

Issued — Material issued from the Storage functional location (warehouses) and destined for either on-station or off-station users.

Tenants — Material being sent from on-station users (tenants) to off-station users via the Packing and Shipping functional location.

7.6.2.1 Non-community.

- (a) **Material Throughput** — Approximately 25% increases (relative to the initial values) in the amounts of palletized material handled by the Main Supply Systems caused minimal change to the throughput "in" and "out" functional values. However, when the amounts of material inputs were increased by more than 50%, the material flow was inhibited.
- (b) **MHE Functional Location Utilization** — As the material inputs were increased, the percent of MHE utilization increased by a proportional amount at the Packing and Shipping and Storage functional locations. The percent of utilization saturation point appears to have been reached at the Receiving function (for all the activities) when the material inputs were increased by about 25%.
- (c) **Overall MHE Utilization** — The overall utilization increased proportionately to the percent of material input values; however, the percent of utilization did not increase as much as the percent of material inputs for values of about 25%.

7.6.2.2 Community.

- (a) **Material Throughput** — The effects of significant increases in the amounts of material on the "in" to "out" throughput ratio appear to be minor for all the activities' functional locations.
- (b) **MHE Functional Location Utilization** — The increases in the amounts of material inputs were proportional to the increases in MHE utilization at all the activities' functional locations.
- (c) **Overall MHE Utilization** — The overall MHE utilization increases were directly proportional to the material input increases for all the activities.

7.6.2.3 Non-community vs. Community Comparisons.

- (a) **Material Throughout** — There was no significant difference or advantage in either the non-community or community MHE arrangement when the material input increases were approximately 25%. However, when the amounts of material input were increased by more than 50%, a material flow constraint developed at the non-community Receiving functional locations. This situation does not exist with the community arrangement.
- (b) **MHE Functional Location Utilization** — When the material inputs increased by more than 50%, MHE utilization went to maximum (approximately 75%) for all the non-community Receiving functional locations. This situation did not occur for the community MHE

arrangements. The MHE available at the Packing and Shipping in the community pool arrangement absorbed the effects of the increased material flow.

- (c) Overall MHE Utilization — Comparison of the non-community and community MHE arrangements indicates minor MHE utilization differences when the material input increases were held to approximately 25% for all the activities. However, when the material inputs were greater than 50%, a relatively greater percent of MHE utilization was noted at all the community arrangements because the utilization at non-community Receiving functions (at all activities) had reached maximum.

APPENDIX A
MAIN SUPPLY MODEL SAMPLE RUN

ALOCK NUMBER	ALUC	OPERATION	APPC/DOCF/G/M/PL/J	COMMENTS	CARD NUMBER
1	FLPA	STORAGE	1	GROUP 21W (4K) FORKLIFTS AT INERT (WEAPONS MATERIAL RECEIVING) DEDICATED TO INERT	2
2	FLAA	STORAGE	944	GROUP 11W (6K) FORKLIFTS AT INERT DEDICATED TO INERT	1
3	FLAC	STORAGE	944	GROUP 23W (4K) FORKLIFTS AT WEAPONS ASSEMBLY AREA DEDICATED TO WEAPONS ASSEMBLY AREA	2
4	FLAC	STORAGE	1	GROUP 13W (6K) FORKLIFTS AT WEAPONS ASSEMBLY AREA DEDICATED TO WEAPONS ASSEMBLY AREA	3
5	FLAP	STORAGE	1	GROUP 21W (4K) FORKLIFTS AT INERT USED AT WEAPONS ASSEMBLY AREA	4
6	FLAA	STORAGE	3	GROUP 21W (4K) FORKLIFTS AT INERT USED AT WEAPONS ASSEMBLY AREA OR LIVE EXPLOSIVE AREA (MAGAZINES OR HOT CARGO AREA)	5
7	FLAA	STORAGE	3	GROUP 11W (6K) FORKLIFTS USED ANYWHERE (LIVE EXPLOSIVE AREA, INERT, OR WEAPONS ASSEMBLY AREA) (LOCATED AT INERT)	6
8	CHFA	STORAGE	944	GROUP 61W CONTAINER HANDLERS (USED AT WEAPONS MATERIAL RECEIVING)	7
9	CPFA	STORAGE	944	GROUP 41W (4/6K) CRANES (USED AT WEAPONS MATERIAL RECEIVING)	8
10	CPFA	STORAGE	944	GROUP 51W (10K) CRANES (USED AT WEAPONS MATERIAL RECEIVING)	9
11	SLWA	STORAGE	944	GROUP 81W (4K) SIDELOADERS (USED AT WEAPONS MATERIAL RECEIVING)	10
12	SLCA	STORAGE	944	GROUP 71W (30K) SIDELOADERS (USED AT WEAPONS MATERIAL RECEIVING)	11
13	CHFR	STORAGE	944	GROUP 62W CONTAINER HANDLERS (USED AT HOT CARGO AREA)	12
14	CPFB	STORAGE	944	GROUP 42 (4/6K) CRANES (USED AT HOT CARGO AREA)	13
15	SLWB	STORAGE	944	GROUP 82W (4K) SIDELOADERS (USED AT HOT CARGO AREA)	14
16	STFW	STORAGE	944	STEADOLE TRUCKS	15
17	SLWC	STORAGE	944	GROUP 83W (4K) SIDELOADERS (USED AT HOT CARGO AREA)	16
18	CPFC	STORAGE	1	GROUP 43W (4/6K) CRANES (USED AT HOT CARGO AREA)	17
				BOMB BUILDUP AREA	18
				SAVEVALUE INITIALIZATIONS	19
	INITIAL	XMSHOURP-1		INITIALIZE TIME	20
	INITIAL	XMSHOURP-1		INITIALIZE TIME	21
	INITIAL	XMSHOURC-1		INITIALIZE TIME	22
	INITIAL	XMSHOURC-1		INITIALIZE TIME	23
	INITIAL	XMSHOURP-1		INITIALIZE TIME	24
	INITIAL	XMSHOURP-1		INITIALIZE TIME	25
	INITIAL	XMSHOURP-1		INITIALIZE TIME	26
	INITIAL	XMSHOURP-1		INITIALIZE TIME	27
	INITIAL	XMSHOURP-1		INITIALIZE TIME	28
	INITIAL	XMSHOURP-1		INITIALIZE TIME	29
	INITIAL	XMSHOURP-1		INITIALIZE TIME	30
	INITIAL	XMSHOURP-1		INITIALIZE TIME	31
	INITIAL	XMSHOURP-1		INITIALIZE TIME	32
	INITIAL	XMSHOURP-1		INITIALIZE TIME	33
	INITIAL	XMSHOURP-1		INITIALIZE TIME	34
	INITIAL	XMSHOURP-1		INITIALIZE TIME	35
	INITIAL	XMSHOURP-1		INITIALIZE TIME	36
	INITIAL	XMSHOURP-1		INITIALIZE TIME	37
	INITIAL	XMSHOURP-1		INITIALIZE TIME	38
	INITIAL	XMSHOURP-1		INITIALIZE TIME	39
	INITIAL	XMSHOURP-1		INITIALIZE TIME	40
	INITIAL	XMSHOURP-1		INITIALIZE TIME	41
	INITIAL	XMSHOURP-1		INITIALIZE TIME	42
	INITIAL	XMSHOURP-1		INITIALIZE TIME	43
	INITIAL	XMSHOURP-1		INITIALIZE TIME	44
	INITIAL	XMSHOURP-1		INITIALIZE TIME	45
	INITIAL	XMSHOURP-1		INITIALIZE TIME	46
	INITIAL	XMSHOURP-1		INITIALIZE TIME	47
	INITIAL	XMSHOURP-1		INITIALIZE TIME	48
	INITIAL	XMSHOURP-1		INITIALIZE TIME	49
	INITIAL	XMSHOURP-1		INITIALIZE TIME	50
	INITIAL	XMSHOURP-1		INITIALIZE TIME	51
	INITIAL	XMSHOURP-1		INITIALIZE TIME	52
	INITIAL	XMSHOURP-1		INITIALIZE TIME	53
	INITIAL	XMSHOURP-1		INITIALIZE TIME	54

HELIC NUMBER	ELIC	OPERATION	ADDRESS	COMMENTS	CARD NUMBER
		INITIAL	X4STLCPA-1	INITIALIZE TIME	55
		INITIAL	X4STLCPA-1	INITIALIZE TIME	56
		INITIAL	X4STLCPA-1	NUMBER OF ENTRIES IN COLUMN 1 OF MHSTBLA	57
		INITIAL	X4STLCPA-1	NUMBER OF ENTRIES IN COLUMN 3 OF MHSTBLA	58
		INITIAL	X4STLCPA-1	NUMBER OF ENTRIES IN COLUMN 5 OF MHSTBLA	59
		INITIAL	X4STLCPA-1	NUMBER OF ENTRIES IN COLUMN 7 OF MHSTBLA	60
		INITIAL	X4STLCPA-1	NUMBER OF ENTRIES IN COLUMN 9 OF MHSTBLA	61
		INITIAL	X4STLCPA-1	NUMBER OF ENTRIES IN COLUMN 11 OF MHSTBLA	62
		INITIAL	X4STLCPA-1	NUMBER OF ENTRIES IN COLUMN 13 OF MHSTBLA	63
		INITIAL	X4STLCPA-1	TIME (IN MINUTES) FOR A GROUP 61W	64
				CONTAINER HANDLER TO OFFLOAD A	65
				CONTAINER FROM A TRUCK	66
		INITIAL	X4STLCPA-1	TIME (IN MINUTES) TO LOAD MATERIAL IN	67
				TRUCK ONTO SKIDS	68
		INITIAL	X4STLCPA-1	FRACTION OF TIME GROUP 21W FORKLIFT IS	69
				CHOSEN INSTEAD OF GROUP 11W FORKLIFT	70
				WHEN BOTH ARE AVAILABLE (EXPRESSED	71
				IN PARTS PER THOUSAND)	72
		INITIAL	X4STLCPA-1	FRACTION OF TIME GROUP 11W FORKLIFT IS	73
				CHOSEN INSTEAD OF GROUP 21W FORKLIFT	74
				WHEN BOTH ARE AVAILABLE (EXPRESSED	75
				IN PARTS PER THOUSAND)	76
		INITIAL	X4STLCPA-1	TIME (IN MINUTES) FOR A 4K OR 6K	77
				FORKLIFT TO UNLOAD A PALLET FROM	78
				A TRUCK, OR VICE VERSA	79
		INITIAL	X4STLCPA-1	TIME (IN MINUTES) FOR A 4/6K CRANE	80
				TO UNLOAD A NON-FORKLIFTABLE LOAD	81
				FROM A TRUCK, OR VICE VERSA	82
		INITIAL	X4STLCPA-1	TIME (IN MINUTES) FOR A 10K CRANE TO	83
				UNLOAD A NON-FORKLIFTABLE LOAD FROM	84
				A TRUCK, OR VICE VERSA	85
		INITIAL	X4STLCPA-1	- 0 IF NON-FORKLIFTABLE LOADS AT	86
				WEAPONS MATERIAL RECEIVING ARE TO	87
				BE STORED OUTSIDE WAREHOUSE;	88
				- 1 IF NON-FORKLIFTABLE LOADS AT	89
				WEAPONS MATERIAL RECEIVING ARE TO	90
				BE STORED INSIDE WAREHOUSE	91
		INITIAL	X4STLCPA-1	TIME (IN MINUTES) FOR A SIDELOADER TO	92
				MOVE A NON-FORKLIFTABLE LOAD FROM	93
				OUTSIDE WAREHOUSE TO INSIDE	94
				WAREHOUSE STORAGE AT WEAPONS	95
				MATERIAL RECEIVING	96
		INITIAL	X4STLCPA-1	- 0 IF FORKLIFTABLE LOADS (PALLET) AT	97
				WEAPONS MATERIAL RECEIVING ARE TO BE	98
				STORED OUTSIDE WAREHOUSE;	99
				- 1 IF FORKLIFTABLE LOADS (PALLET) AT	100
				WEAPONS MATERIAL RECEIVING ARE TO BE	101
				STORED INSIDE WAREHOUSE	102
		INITIAL	X4STLCPA-1	TIME (IN MINUTES) FOR A 4K OR 6K	103
				FORKLIFT TO MOVE A FORKLIFTABLE LOAD	104
				(PALLET) FROM OUTSIDE WAREHOUSE TO	105
				INSIDE WAREHOUSE STORAGE AT	106
				WEAPONS MATERIAL RECEIVING	107
		INITIAL	X4STLCPA-1	TIME (IN MINUTES) FOR A 4K OR 6K	108
				FORKLIFT TO MOVE A PALLET FROM THE	109

BLOCK NUMBER	LOC	OPERATION	A,B,C,D,E,F,G,H,I,J	COMMENTS	CARD NUMBER
•	•	•	•	WHEN BOTH ARE AVAILABLE (EXPRESSED IN PARTS PER HOUR)	165
•	•	INITIAL	X4SLTMA,12	TIME (IN MINUTES) TO MOVE A 4K OR 6K FORKLIFT FROM HOT CARGO AREA/OFFICE TO MAGAZINE	166
•	•	INITIAL	X4STPPFD,4	TIME (IN MINUTES) FOR A 4K OR 6K FORKLIFT TO MOVE A PALLET FROM STORAGE (AT MAGAZINE) TO TEMPORARY STAGING (AT MAGAZINE)	167
•	•	INITIAL	X4STTAN,6	TIME (IN MINUTES) FOR A 4K OR 6K FORKLIFT AND A TRUCK TO TRANSIT FROM TEMPORARY STAGING (MAGAZINE) TO PACKING AND SHIPPING (WEAPONS ASSEMBLY AREA)	168
•	•	INITIAL	X4STTRPO,12	TIME (IN MINUTES) FOR A 4K OR 6K FORKLIFT TO BE TRUCKED FROM PACKING AND SHIPPING (WEAPONS ASSEMBLY AREA) TO HOT CARGO AREA/OFFICE	169
•	•	INITIAL	X4STMPFE,4	TIME (IN MINUTES) FOR A 4K OR 6K FORKLIFT TO MOVE A PALLET FROM STORAGE (INERT WEAPONS WAREHOUSE) TO TEMPORARY STAGING (INERT WEAPONS WAREHOUSE)	170
•	•	INITIAL	X4STTRNE,12	TIME (IN MINUTES) FOR A TRUCK TO TRANSIT FROM TEMPORARY STAGING (INERT WEAPONS WAREHOUSE) TO BOMB BUILDUP AREA	171
•	•	INITIAL	X4STSMIN,1	MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF STRADDLE TRUCK	172
•	•	INITIAL	X4STSMAX,3	MAXIMUM NUMBER OF PALLETS THAT STRADDLE TRUCK CAN CARRY	173
•	•	INITIAL	X4STKMIN,1	MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF FLATBED TRUCK	174
•	•	INITIAL	X4STKMAX,13	MAXIMUM NUMBER OF PALLETS THAT FLATBED TRUCK CAN CARRY	175
•	•	INITIAL	X4STMPFF,1	TIME (IN MINUTES) FOR A 4K OR 6K FORKLIFT TO POSITION ONE PALLET FOR STRADDLE TRUCK	176
•	•	INITIAL	X4STSLTA,2	TIME (IN MINUTES) FOR A 4K SIDELOADER TO TRANSIT BETWEEN INERT WEAPONS WAREHOUSE AND BOMB BUILDUP AREA	177
•	•	INITIAL	X4STSLTB,2	TIME (IN MINUTES) FOR A 30K SIDELOADER TO TRANSIT BETWEEN INERT WEAPONS WAREHOUSE AND BOMB BUILDUP AREA	178
•	•	INITIAL	X4STMPFG,6	TIME (IN MINUTES) FOR A 4K OR 6K FORKLIFT TO MOVE A PALLET FROM A MAGAZINE AND LOAD IT ONTO A TRUCK	179
•	•	INITIAL	X4STTRNF,6	TIME (IN MINUTES) FOR A TRUCK AND FORKLIFT TO TRANSIT FROM MAGAZINES TO BOMB BUILDUP AREA	180
•	•	INITIAL	X4STTRNG,12	TIME (IN MINUTES) FOR A TRUCK AND FORKLIFT TO TRANSIT FROM BOMB BUILDUP AREA TO HOT CARGO AREA	181
•	•	INITIAL	X4STSLTC,2	TIME (IN MINUTES) FOR A 4K SIDELOADER TO MOVE A LOAD FROM THE MAGAZINE TO THE BOMB BUILDUP AREA AND RETURN	182
•	•	INITIAL	X4STSTTA,2	TIME (IN MINUTES) FOR STRADDLE TRUCK TO TRANSIT FROM INERT WEAPONS WAREHOUSE TO BOMB BUILDUP AREA	183
•	•	•	•	•	184
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BLOCK NUMBER	FLCC	OPERATION	A,B,C,D,E,F,G,H,I,J	COMMENTS	CARD NUMBER
1	•	INITIAL	XHSTITB,2	TIME (IN MINUTES) FOR STRADDLE TRUCK TO TRANSIT FROM BOMB BUILDUP AREA TO	220
2	•	INITIAL	XHSTIMSLC,2	UN-STATION USER AND RETURN	221
3	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A 4K SIDELOADER	222
4	•	INITIAL	XHSTIMSLC,2	1C TRANSIT FROM BOMB BUILDUP AREA TO	223
5	•	INITIAL	XHSTIMSLC,2	UN-STATION USER AND RETURN	224
6	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK TO	225
7	•	INITIAL	XHSTIMSLC,2	TRANSIT FROM BOMB BUILDUP AREA TO	226
8	•	INITIAL	XHSTIMSLC,2	ON-STATION USER	227
9	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A 4K OF 6K FORKLIFT TO MOVE A PALLET FROM BOMB BUILDUP AREA TO PACKING AND	228
10	•	INITIAL	XHSTIMSLC,2	SHIPPING (PACKING AND SHIPPING IS ALWAYS ADJACENT TO	229
11	•	INITIAL	XHSTIMSLC,2	BOMB BUILDUP AREA)	230
12	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A 4K SIDELOADER	231
13	•	INITIAL	XHSTIMSLC,2	TO MOVE A NON-FORKLIFTABLE CONSOLIDATED WEAPON FROM	232
14	•	INITIAL	XHSTIMSLC,2	BOMB BUILDUP AREA TO PACKING AND SHIPPING	233
15	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) TO PACK AND PACKAGE	234
16	•	INITIAL	XHSTIMSLC,2	A NON-FORKLIFTABLE CONSOLIDATED WEAPON	235
17	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A 4K OF 6K	236
18	•	INITIAL	XHSTIMSLC,2	FORKLIFT TO TRANSIT FROM THE INERT RECEIVING AREA	237
19	•	INITIAL	XHSTIMSLC,2	TO THE HOT CARGO AREA	238
20	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	239
21	•	INITIAL	XHSTIMSLC,2	A 4K OR 6K FORKLIFT TO TRANSIT BETWEEN THE INERT	240
22	•	INITIAL	XHSTIMSLC,2	RECEIVING AREA AND THE MAGAZINE AREA	241
23	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND A	242
24	•	INITIAL	XHSTIMSLC,2	4K OR 6K FORKLIFT TO TRANSIT BETWEEN THE BOMB	243
25	•	INITIAL	XHSTIMSLC,2	BUILDUP AREA AND THE INERT RECEIVING AREA	244
26	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	245
27	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	246
28	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	247
29	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	248
30	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	249
31	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	250
32	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	251
33	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	252
34	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	253
35	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	254
36	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	255
37	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	256
38	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	257
39	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	258
40	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	259
41	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	260
42	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	261
43	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	262
44	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	263
45	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	264
46	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	265
47	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	266
48	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	267
49	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	268
50	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	269
51	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	270
52	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	271
53	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	272
54	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	273
55	•	INITIAL	XHSTIMSLC,2	TIME (IN MINUTES) FOR A TRUCK AND	274

VARIABLE DEFINITIONS

1	TLPPA	VARIABLE	XHSTLPPA+P1
2	TLPPB	VARIABLE	XHSTLPPB+P1
3	TLPPC	VARIABLE	XHSTLPPC+P1
4	TLPPD	VARIABLE	XHSTLPPD+P1
5	TLPPF	VARIABLE	XHSTLPPF+P1
6	TLPPG	VARIABLE	XHSTLPPG+P1
7	TLPPH	VARIABLE	XHSTLPPH+P1
8	TLPPJ	VARIABLE	XHSTLPPJ+P1
9	TLPPK	VARIABLE	XHSTLPPK+P1
10	TLPPM	VARIABLE	XHSTLPPM+P1
11	TLPPN	VARIABLE	XHSTLPPN+P1
12	TLPPP	VARIABLE	XHSTLPPP+P1
13	TLPPQ	VARIABLE	XHSTLPPQ+P1
14	TLPPR	VARIABLE	XHSTLPPR+P1
15	TLPPS	VARIABLE	XHSTLPPS+P1
16	TLPPV	VARIABLE	XHSTLPPV+P1
17	TLPPW	VARIABLE	XHSTLPPW+P1
18	TLPPX	VARIABLE	XHSTLPPX+P1
19	TLPPY	VARIABLE	XHSTLPPY+P1
20	TLPPZ	VARIABLE	XHSTLPPZ+P1
21	TLPPA	VARIABLE	XHSTLPPA+P1
22	TLPPB	VARIABLE	XHSTLPPB+P1
23	TLPPC	VARIABLE	XHSTLPPC+P1
24	TLPPD	VARIABLE	XHSTLPPD+P1
25	TLPPF	VARIABLE	XHSTLPPF+P1

BLOCK NUMBER	BLCK NUMBER	OPERATION	A,B,C,D,E,F,G,H,I,J	COMMENTS	CARD NUMBER
26	NUM16	VARIABLE	PSFLAAX+SFLAAX		275
27	NUM16	VARIABLE	MSFLBAX+SFLBAX		276
28	NUM20	VARIABLE	MSFLCAA+SFLCAA		277
29	PRODA	VARIABLE	MSOVUTL1,P1,MSOVUTL(2,P1)		278
30	SUMC	VARIABLE	MSOVUTL(2,P1)+MSOVUTL(2,P1)		279
31	SUMF	VARIABLE	MSOVUTL(3,P1)+MSOVUTL(3,P1)		280
32	DIVI	VARIABLE	(MSOVUTL(3,P1)/MSOVUTL(2,P1))/10		281
					282
					283
					284
					285
1	TBLA	MATRIX	M,10,14		286
				COLUMN 1 - HOURS AT WHICH TRUCKS ARRIVE AT WEAPONS MATERIAL	287
				RECEIVING CARRYING INERT INCORPORATING MATERIAL	288
				COLUMN 2 - NUMBER OF TRUCKS ARRIVING AT WEAPONS MATERIAL	289
				RECEIVING AT HOUR SPECIFIED IN COLUMN 1	290
				COLUMN 3 - HOURS AT WHICH VEHICLES ARRIVE AT HOT CARGO AREA/OFFICE	291
				CARRYING LIVE EXPLOSIVES	292
				COLUMN 4 - NUMBER OF VEHICLES ARRIVING AT HOT CARGO AREA/OFFICE	293
				AT HOUR SPECIFIED IN COLUMN 3	294
				COLUMN 5 - HOURS AT WHICH ISSUE DOCUMENTS ARRIVE AT INERT	295
				WAREHOUSE FOR INERT BULK MATERIAL (PALLETIZED) GOING TO	296
				OFF-STATION USERS (INERT WAREHOUSE ADJACENT TO PACKING AND	297
				SHIPPING)	298
				COLUMN 6 - NUMBER OF ISSUE DOCUMENTS ARRIVING AT INERT WAREHOUSE	299
				AT HOUR SPECIFIED IN COLUMN 5 (FOR INERT WAREHOUSE ADJACENT	300
				TO PACKING AND SHIPPING)	301
				COLUMN 7 - HOURS AT WHICH ISSUE DOCUMENTS ARRIVE AT INERT WAREHOUSE	302
				FOR INERT BULK MATERIAL (PALLETIZED) GOING TO OFF-STATION USERS	303
				(INERT WAREHOUSE NOT ADJACENT TO PACKING AND SHIPPING)	304
				COLUMN 8 - NUMBER OF ISSUE DOCUMENTS ARRIVING AT INERT WAREHOUSE	305
				AT HOUR SPECIFIED IN COLUMN 7 (FOR INERT WAREHOUSE NOT	306
				ADJACENT TO PACKING AND SHIPPING)	307
				COLUMN 9 - HOURS AT WHICH ISSUE DOCUMENTS ARRIVE AT HOT CARGO	308
				AREA/OFFICE FOR LIVE EXPLOSIVE BULK MATERIAL (PALLETIZED)	309
				GOING TO OFF-STATION USERS	310
				COLUMN 10 - NUMBER OF ISSUE DOCUMENTS ARRIVING AT HOT CARGO	311
				AREA/OFFICE AT HOUR SPECIFIED IN COLUMN 9	312
				COLUMN 11 - HOURS AT WHICH ISSUE DOCUMENTS ARRIVE AT INERT	313
				WEAPONS WAREHOUSE SPECIFYING MATERIAL TO BE MOVED TO	314
				CONSOLIDATION STAGING (BOMB BUILDUP AREA)	315
				(DESCRIBED IN MHSBLB(5,1), MHSBLB(5,2), MHSBLB(5,3)	316
				AND MHSBLB(5,4))	317
				COLUMN 12 - NUMBER OF ISSUE DOCUMENTS ARRIVING AT INERT WEAPONS	318
				WAREHOUSE AT HOUR SPECIFIED IN COLUMN 11	319
				COLUMN 13 - HOURS AT WHICH ISSUE DOCUMENTS ARRIVE AT HOT CARGO	320
				AREA/OFFICE SPECIFYING MATERIAL (LIVE EXPLOSIVES) TO BE MOVED	321
				FROM MAGAZINES TO BOMB BUILDUP AREA	322
				(DESCRIBED IN MHSBLB(5,5) AND MHSBLB(5,6))	323
				COLUMN 14 - NUMBER OF ISSUE DOCUMENTS ARRIVING AT HOT CARGO	324
				AREA/OFFICE AT HOUR SPECIFIED IN COLUMN 13	325
2	TBLD	MATRIX	M,5,6		326
				ROW 1 CONTAINS DATA FOR TRUCKS ARRIVING AT WEAPONS MATERIAL	327
				RECEIVING CARRYING INERT INCORPORATING MATERIAL	328
				(1,1) - 1 IF CARGO IS CONTAINERIZED	329
				(1,1) - 0 IF CARGO IS NOT CONTAINERIZED	

BLOCK NUMBER	LOC	OPERATION	ALB, C, D, E, F, G, H, I, J	COMMENTS	CARD NUMBER
•	•	(1,2) = NUMBER OF PALLETS ON PALLET EQUIVALENTS ON TRUCK			330
•	•	(1,3) = 1 IF LOADS ARE ON SKIDS			331
•	•	(1,4) = 0 IF LOADS ARE NOT ON SKIDS			332
•	•	(1,5) = NUMBER OF NON-FORKLIFTABLE LOADS LESS THAN OR EQUAL TO 4K ON TRUCK			333
•	•	(1,6) = NUMBER OF NON-FORKLIFTABLE LOADS GREATER THAN 4K ON TRUCK			334
•	•	ROW 2 CONTAINS DATA FOR LIVE EXPLOSIVE VEHICLES ARRIVING AT HOT CARGO AREA/OFFICE			335
•	•	(2,1) = 1 IF CARGO IS CONTAINERIZED			336
•	•	(2,2) = 0 IF CARGO IS NOT CONTAINERIZED			337
•	•	(2,3) = NUMBER OF PALLETS OR PALLET EQUIVALENTS ON VEHICLE			338
•	•	(2,4) = 1 IF LOADS ARE ON SKIDS			339
•	•	(2,5) = 0 IF LOADS ARE NOT ON SKIDS			340
•	•	(2,6) = NUMBER OF NON-FORKLIFTABLE LOADS ON VEHICLE			341
•	•	ROW 3 CONTAINS DATA FOR ISSUE DOCUMENTS ARRIVING AT INERT WAREHOUSE SPECIFYING INERT BULK MATERIAL (PALETTIZED) GOING TO OFF-STATION USERS			342
•	•	(3,1) = NUMBER OF PALLETS SPECIFIED IN EACH ISSUE DOCUMENT FOR PACKING AND SHIPPING			343
•	•	(3,2) = NUMBER OF PALLETS SPECIFIED IN EACH ISSUE DOCUMENT FOR THE CASE WHEN INERT WAREHOUSE IS ADJACENT TO PACKING AND SHIPPING			344
•	•	ROW 4 CONTAINS DATA FOR ISSUE DOCUMENTS ARRIVING AT HOT CARGO AREA/OFFICE SPECIFYING LIVE EXPLOSIVE BULK MATERIAL (PALETTIZED) GOING TO OFF-STATION USERS			345
•	•	(4,1) = NUMBER OF PALLETS SPECIFIED IN EACH ISSUE DOCUMENT			346
•	•	ROW 5 (COLUMNS 1, 2, 3 AND 4) CONTAINS DATA FOR ISSUE DOCUMENTS ARRIVING AT INERT WEAPONS WAREHOUSE SPECIFYING MATERIAL TO BE MOVED TO CONSOLIDATION STAGING (BOHB BUILDUP AREA)			347
•	•	(5,1) = NUMBER OF FORKLIFTABLE LOADS TO GO BY TRUCK			348
•	•	(5,2) = NUMBER OF FORKLIFTABLE LOADS TO GO BY STRADDLE TRUCK			349
•	•	(5,3) = NUMBER OF NON-FORKLIFTABLE LOADS LESS THAN OR EQUAL TO 4K			350
•	•	(5,4) = NUMBER OF NON-FORKLIFTABLE LOADS GREATER THAN 4K			351
•	•	ROW 5 (COLUMNS 5 AND 6) CONTAINS DATA FOR ISSUE DOCUMENTS ARRIVING AT HOT CARGO AREA/OFFICE SPECIFYING LIVE EXPLOSIVES GOING FROM MAGAZINES TO BOHB BUILDUP AREA			352
•	•	(5,5) = NUMBER OF FORKLIFTABLE LOADS			353
•	•	(5,6) = NUMBER OF NON-FORKLIFTABLE LOADS			354
3	MWPN	MATRIX	M2,1,5		355
•	•	(1,1) = NUMBER OF FORKLIFTABLE LOADS OF INERT MATERIAL USED IN THE ASSEMBLY OF MMSMWP(1,5) WEAPONS			356
•	•	(1,2) = NUMBER OF NON-FORKLIFTABLE LOADS OF INERT MATERIAL USED IN THE ASSEMBLY OF MMSMWP(1,5) WEAPONS			357
•	•	(1,3) = NUMBER OF FORKLIFTABLE LOADS OF LIVE EXPLOSIVES USED IN THE ASSEMBLY OF MMSMWP(1,5) WEAPONS			358
•	•	(1,4) = NUMBER OF NON-FORKLIFTABLE LOADS OF LIVE EXPLOSIVES USED IN THE ASSEMBLY OF MMSMWP(1,5) WEAPONS			359
•	•	(1,5) = NUMBER OF ASSEMBLED WEAPONS RESULTING FROM COMBINING MMSMWP(1,1) + MMSMWP(1,2) + MMSMWP(1,3) + MMSMWP(1,4)			360
4	MTLA	MATRIX	M2,2,6		361
•	•	(1,1) = NUMBER OF PALLETS UNLOADED FROM TRUCKS AT WEAPONS MATERIAL RECEIVING AND CURRENTLY AT WEAPONS MATERIAL RECEIVING (OUTSIDE WAREHOUSE)			362
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COMMENTS

(1,20) - ACCUMULATED NUMBER OF NON-FORKLIFTABLE INERT LOADS
 LEAVING INERT WAREHOUSE GOING TO BOMB BUILDUP AREA FOR
 WEAPONS CONSOLIDATION (303 IN)
 (1,21) - ACCUMULATED NUMBER OF FORKLIFTABLE LIVE EXPLOSIVE
 LOADS ISSUED FROM MAGAZINES GOING TO BOMB BUILDUP AREA FOR
 WEAPONS CONSOLIDATION (302 IN)
 (1,22) - ACCUMULATED NUMBER OF NON-FORKLIFTABLE LIVE EXPLOSIVE
 LOADS ISSUED FROM MAGAZINES GOING TO BOMB BUILDUP AREA FOR
 WEAPONS CONSOLIDATION (302 IN)
 (1,23) - ACCUMULATED NUMBER OF FORKLIFTABLE LIVE EXPLOSIVE
 LOADS LEAVING MAGAZINES GOING TO BOMB BUILDUP AREA FOR
 WEAPONS CONSOLIDATION (302 OUT)
 (1,24) - ACCUMULATED NUMBER OF NON-FORKLIFTABLE LIVE
 EXPLOSIVE LOADS LEAVING MAGAZINES GOING TO BOMB BUILDUP
 AREA FOR WEAPONS CONSOLIDATION (302 OUT)
 (1,25) - ACCUMULATED NUMBER OF FORKLIFTABLE LIVE EXPLOSIVE
 LOADS COMING INTO BOMB BUILDUP AREA FROM MAGAZINES FOR
 WEAPONS CONSOLIDATION (303 IN)
 (1,26) - ACCUMULATED NUMBER OF NON-FORKLIFTABLE LIVE EXPLOSIVE
 LOADS COMING INTO BOMB BUILDUP AREA FROM MAGAZINES FOR
 WEAPONS CONSOLIDATION (303 IN)
 (1,27) - ACCUMULATED NUMBER OF FORKLIFTABLE CONSOLIDATED
 WEAPONS (PALLETS) LEAVING BOMB BUILDUP AREA GOING TO
 ON-STATION USERS (303 OUT)
 (1,28) - ACCUMULATED NUMBER OF NON-FORKLIFTABLE CONSOLIDATED
 WEAPONS LEAVING BOMB BUILDUP AREA GOING TO ON-STATION USERS
 (303 OUT)
 (1,29) - ACCUMULATED NUMBER OF FORKLIFTABLE CONSOLIDATED
 WEAPONS (PALLETS) LEAVING BOMB BUILDUP AREA GOING TO
 OFF-STATION USERS (303 OUT)
 (1,30) - ACCUMULATED NUMBER OF NON-FORKLIFTABLE CONSOLIDATED
 WEAPONS LEAVING BOMB BUILDUP AREA GOING TO OFF-STATION USERS
 (303 OUT)
 **** MATRIX M,10,30 THROUGHPUT MATRIX. VALUES ARE
 CUMULATIVE OVER TIME. THE VALUES IN THE FIRST ROW ARE FOR
 THE FIRST 8 HOURS OF THE RUN; THE VALUES IN THE SECOND ROW
 ARE FOR THE FIRST 16 HOURS OF THE RUN; THE VALUES IN THE
 THIRD ROW ARE FOR THE FIRST 24 HOURS OF THE RUN; AND SO
 ON, EACH SUCCESSIVE ROW GIVING CUMULATIVE VALUES
 REPRESENTATIVE OF THE SITUATION AFTER THE PASSAGE OF
 8 MORE HOURS OF TIME.
 COLUMN 1 - ACCUMULATED INERT INPUT MATERIAL BY NUMBER OF
 FORKLIFTABLE LOADS COMING INTO WEAPONS MATERIAL
 RECEIVING BY VEHICLE (301 IN)
 COLUMN 2 - ACCUMULATED INERT INPUT MATERIAL BY NUMBER OF
 NON-FORKLIFTABLE LOADS COMING INTO WEAPONS MATERIAL
 RECEIVING BY VEHICLE (301 IN)
 COLUMN 3 - ACCUMULATED NUMBER OF LIVE EXPLOSIVE FORKLIFTABLE
 LOADS COMING INTO HOT CARGO AREA BY VEHICLE
 (301 IN)
 COLUMN 4 - ACCUMULATED NUMBER OF LIVE EXPLOSIVE NON-FORKLIFTABLE
 LOADS COMING INTO HOT CARGO AREA BY VEHICLE
 (301 IN)
 COLUMN 5 - ACCUMULATED NUMBER OF INERT PALLETS ISSUED IN BULK
 FROM INERT WAREHOUSE GOING TO OFF-STATION USERS

BLOCK NUMBER	LOC	OPERATION	A,B,C,D,E,F,G,H,I,J	COMMENTS	CARD NUMBER
•	•	•	•	(301 IN)	605
•	•	•	•	COLUMN 1 = ACCUMULATED NUMBER OF INERT PALLETTS ISSUED FROM INERT	606
•	•	•	•	WAREHOUSE GOING TO BOMB BUILDUP AREA FOR WEAPONS	607
•	•	•	•	CONSOLIDATION (301 IN)	608
•	•	•	•	COLUMN 7 = ACCUMULATED NUMBER OF NON-FORKLIFTABLE INERT ITEMS	609
•	•	•	•	ISSUED FROM INERT WAREHOUSE GOING TO BOMB BUILDUP	610
•	•	•	•	AREA FOR WEAPONS CONSOLIDATION (301 IN)	611
•	•	•	•	COLUMN 8 = ACCUMULATED NUMBER OF INERT FORKLIFTABLE LOADS	612
•	•	•	•	LEAVING WEAPONS MATERIAL RECEIVING AND GOING INTO	613
•	•	•	•	WEAPONS WAREHOUSING (301 OUT)	614
•	•	•	•	COLUMN 9 = ACCUMULATED NUMBER OF INERT NON-FORKLIFTABLE LOADS	615
•	•	•	•	LEAVING WEAPONS MATERIAL RECEIVING AND GOING INTO	616
•	•	•	•	WEAPONS WAREHOUSING (301 OUT)	617
•	•	•	•	COLUMN 10 = ACCUMULATED NUMBER OF LIVE EXPLOSIVE NON-FORKLIFTABLE	618
•	•	•	•	LOADS LEAVING MOT CARGO AREA AND GOING INTO	619
•	•	•	•	MAGAZINE (301 OUT)	620
•	•	•	•	COLUMN 11 = ACCUMULATED NUMBER OF LIVE EXPLOSIVE FORKLIFTABLE	621
•	•	•	•	LOADS LEAVING WEAPONS MATERIAL RECEIVING AND GOING	622
•	•	•	•	INTO MAGAZINE (301 OUT)	623
•	•	•	•	COLUMN 12 = ACCUMULATED NUMBER OF INERT PALLETTS ISSUED	624
•	•	•	•	IN BULK LEAVING PACKING AND SHIPPING AND GOING TO	625
•	•	•	•	OFF-STATION USERS (301 OUT)	626
•	•	•	•	COLUMN 13 = ACCUMULATED NUMBER OF INERT PALLETTS LEAVING INERT	627
•	•	•	•	WAREHOUSE GOING TO BOMB BUILDUP AREA FOR WEAPONS	628
•	•	•	•	CONSOLIDATION (301 OUT)	629
•	•	•	•	COLUMN 14 = ACCUMULATED NUMBER OF NON-FORKLIFTABLE INERT LOADS	630
•	•	•	•	LEAVING INERT WAREHOUSE GOING TO BOMB BUILDUP AREA	631
•	•	•	•	FOR WEAPONS CONSOLIDATION (301 OUT)	632
•	•	•	•	COLUMN 15 = ACCUMULATED NUMBER OF LIVE EXPLOSIVE PALLETTS	633
•	•	•	•	ISSUED IN BULK FROM MAGAZINES GOING TO	634
•	•	•	•	OFF-STATION USERS (301 IN)	635
•	•	•	•	COLUMN 16 = ACCUMULATED NUMBER OF FORKLIFTABLE LIVE EXPLOSIVE	636
•	•	•	•	LOADS ISSUED FROM MAGAZINES GOING TO BOMB BUILDUP	637
•	•	•	•	AREA FOR WEAPONS CONSOLIDATION (301 IN)	638
•	•	•	•	COLUMN 17 = ACCUMULATED NUMBER OF NON-FORKLIFTABLE LIVE EXPLOSIVE	639
•	•	•	•	LOADS ISSUED FROM MAGAZINES GOING TO BOMB BUILDUP	640
•	•	•	•	AREA FOR WEAPONS CONSOLIDATION (301 IN)	641
•	•	•	•	COLUMN 18 = ACCUMULATED NUMBER OF LIVE EXPLOSIVE PALLETTS	642
•	•	•	•	ISSUED IN BULK LEAVING MAGAZINE AREAS GOING TO	643
•	•	•	•	PACKING AND SHIPPING (IN WEAPONS ASSEMBLY AREA)	644
•	•	•	•	DESTINED FOR OFF-STATION USERS (301 OUT)	645
•	•	•	•	COLUMN 19 = ACCUMULATED NUMBER OF FORKLIFTABLE LIVE EXPLOSIVE	646
•	•	•	•	LOADS LEAVING MAGAZINES GOING TO BOMB BUILDUP AREA	647
•	•	•	•	FOR WEAPONS CONSOLIDATION (301 OUT)	648
•	•	•	•	COLUMN 20 = ACCUMULATED NUMBER OF NON-FORKLIFTABLE LIVE EXPLOSIVE	649
•	•	•	•	LOADS LEAVING MAGAZINES GOING TO BOMB BUILDUP AREA	650
•	•	•	•	FOR WEAPONS CONSOLIDATION (301 OUT)	651
•	•	•	•	COLUMN 21 = ACCUMULATED NUMBER OF LIVE EXPLOSIVE PALLETTS	652
•	•	•	•	ISSUED IN BULK ENTERING PACKING AND SHIPPING	653
•	•	•	•	(IN WEAPONS ASSEMBLY AREA) FROM MAGAZINE AREAS	654
•	•	•	•	(DESTINED FOR OFF-STATION USERS) (302 IN)	655
•	•	•	•	COLUMN 22 = ACCUMULATED NUMBER OF INERT PALLETTS COMING INTO BOMB	656
•	•	•	•	BUILDUP AREA FROM INERT WAREHOUSE FOR WEAPONS	657
•	•	•	•	CONSOLIDATION (302 IN)	658
•	•	•	•	COLUMN 23 = ACCUMULATED NUMBER OF NON-FORKLIFTABLE INERT LOADS	659

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BLOCK NUMBER	LOC	OPERATION	APP, C, D, E, F, G, H, I, J	COMMENTS	CARD NUMBER
		REALLUCATE BLD, 1000			
		STORAGE DEFINITIONS			
1	FLPA	STORAGE	57	GROUP 21Y (4K) FORKLIFTS	2
2	FLAA	STORAGE	36	GROUP 11Y (6K) FORKLIFTS	1
3	FLCA	STORAGE	27	GROUP 31Y FORKLIFTS (EQUAL TO OR GREATER THAN 10K)	2
4	FLCB	STORAGE	15	GROUP 32Y FORKLIFTS (EQUAL TO OR GREATER THAN 10K)	3
5	CFSA	STORAGE	2	GROUP 51Y CRANES (EQUAL TO OR GREATER THAN 10K)	4
6	CFEB	STORAGE	4	GROUP 52Y CRANES (EQUAL TO OR GREATER THAN 10K)	5
7	STKIA	STORAGE	6	GROUP 91Y ST6400LE TRUCKS	6
8	FLAF	STORAGE	25	GROUP 12Y (6K) FORKLIFTS - ASSIGNED TO REPAIR SHOPS	7
9	FLER	STORAGE	49	GROUP 22Y (4K) FORKLIFTS - ASSIGNED TO REPAIR SHOPS	8
10	SLER	STORAGE	1	GROUP 72Y SICELOADERS - ASSIGNED TO REPAIR SHOPS	9
		SAVEVALUE DEFINITIONS			
		INITIAL XMSHURAP-1		INITIALIZE TIME	10
		INITIAL XMSHURAP-1		INITIALIZE TIME	11
		INITIAL XMSHURAP-1		INITIALIZE TIME	12
		INITIAL XMSHURAP-1		INITIALIZE TIME	13
		INITIAL XMSHURAP-1		INITIALIZE TIME	14
		INITIAL XMSHURAP-1		INITIALIZE TIME	15
		INITIAL XMSHURAP-1		INITIALIZE TIME	16
		INITIAL XMSHURAP-1		INITIALIZE TIME	17
		INITIAL XMSHURAP-1		INITIALIZE TIME	18
		INITIAL XMSHURAP-1		INITIALIZE TIME	19
		INITIAL XMSHURAP-1		INITIALIZE TIME	20
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		INITIAL XMSHURAP-1		INITIALIZE TIME	22
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		INITIAL XMSHURAP-1		INITIALIZE TIME	50
		INITIAL XMSHURAP-1		INITIALIZE TIME	51
		INITIAL XMSHURAP-1		INITIALIZE TIME	52
		INITIAL XMSHURAP-1		INITIALIZE TIME	53
		INITIAL XMSHURAP-1		INITIALIZE TIME	54

BLUCK NUMBER	ALGC	OPERATION	A.P.A.C.D.E.F.G.H.I.J	COMMENTS	CARD NUMBER
•	•	INITIAL	X4STPBC0.1	TIME (IN MINUTES) FOR AN EQUAL TO OR GREATER THAN 10K CRANE TO TRANSFER ONE HEAVY BULKY RIPOUT ITEM FROM LOWER DECK TO TEMPORARY	55
•	•	INITIAL	X4STTTA.7	LOCATION (PIER) TIME (IN MINUTES) FOR A TRUCK TO TRANSIT NEAR PIER (FOR TEMPORARY SERVICES)	56
•	•	INITIAL	X4STTCR.0	TIME (IN MINUTES) FOR AN EQUAL TO OR GREATER THAN 10K CRANE TO TRANSIT NEAR PIER AREA (TEMPORARY SERVICES)	57
•	•	INITIAL	X4STTRC.1	TIME (IN MINUTES) FOR AN EQUAL TO OR GREATER THAN 10K CRANE TO TRANSFER ONE ITEM OF RIPOUT MATERIAL FROM UPPER DECK TO TEMPORARY LOCATION (PIER)	58
•	•	INITIAL	X4SDTME.0	MATERIAL HANDLING DELAY TIME (IN MINUTES) BEFORE CUTTING HOLES(S) IN SHIP MULL - 1 IF HOLE(S) IS (ARE) TO BE CUT IN SHIP MULL WITH THE USE OF FORKLIFTS; 0 IF OTHERWISE	59
•	•	INITIAL	X4SMFKL.0	NUMBER OF 4K FORKLIFTS TO BE USED WHEN CUTTING HOLES(S) IN SHIP MULL (IF SPECIFIED)	60
•	•	INITIAL	X4STFKL.0	TIME (IN MINUTES) THAT 4K FORKLIFTS WILL BE USED TO CUT HOLES(S) IN SHIP MULL (IF SPECIFIED)	61
•	•	INITIAL	X4SMFKL.2	NUMBER OF 6K FORKLIFTS TO BE USED WHEN CUTTING HOLES(S) IN SHIP MULL (IF SPECIFIED)	62
•	•	INITIAL	X4STFKL.6	TIME (IN MINUTES) THAT 6K FORKLIFTS WILL BE USED TO CUT HOLES(S) IN SHIP MULL (IF SPECIFIED)	63
•	•	INITIAL	X4SPSTR.0	FRACTION OF TIME WE WANT TO USE GROUP 91Y STRADDLE TRUCKS, INSTEAD OF FORKLIFTS, TO MOVE PALLETIZED RIPOUT ITEMS FROM TEMPORARY STAGING (PIER) TO REPAIR SHOPS (EXPRESSED IN PARTS PER THOUSAND)	64
•	•	INITIAL	X4STPFF.2	TIME (IN MINUTES) FOR A 4K, 6K, OR EQUAL TO OR GREATER THAN 10K FORKLIFT TO TRANSFER ONE PALLETIZED RIPOUT ITEM FROM TEMPORARY STAGING (PIER) TO INSIDE REPAIR SHOPS AND RETURN	65
•	•	INITIAL	X4SYONE.1	FRACTION OF TIME RIPOUT ITEMS GREATER THAN 6K ARE TRANSFERRED FROM TEMPORARY STAGING (PIER) TO INSIDE REPAIR SHOPS BY A GROUP 31Y FORKLIFT, INSTEAD OF BEING TRANSFERRED TO OUTSIDE REPAIR SHOPS BY A FLATBED TRUCK (EXPRESSED IN PARTS PER THOUSAND)	66
•	•	INITIAL	X4SYONE.0	FRACTION OF TIME RIPOUT ITEMS GREATER THAN 6K ARE TRANSFERRED FROM TEMPORARY STAGING (PIER) TO OUTSIDE REPAIR SHOPS BY A FLATBED TRUCK, INSTEAD OF BEING TRANSFERRED TO INSIDE REPAIR SHOPS BY A GROUP 31Y FORKLIFT (EXPRESSED IN PARTS PER THOUSAND)	67
•	•	INITIAL	X4SPNEL.1	FRACTION OF HEAVY BULKY RIPOUT ITEMS WHICH ARE NON-ELONGATED (EXPRESSED IN PARTS PER THOUSAND)	68
•	•	INITIAL	X4SPELN.0	FRACTION OF HEAVY BULKY RIPOUT ITEMS WHICH ARE ELONGATED (EXPRESSED IN PARTS PER THOUSAND)	69
•	•	INITIAL	X4STLPFA.4	TIME (IN MINUTES) FOR AN EQUAL TO OR GREATER THAN 10K FORKLIFT TO LOAD ONE PALLETIZED	70

CARD
NUMBER

COMMENTS

BLOCK
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*LOC

OPERATION

A,B,C,D,E,F,G,H,I,J

* * RIPOUT ITEM ONTO A FLATBED TRUCK
 * * XHSTTRB,10 TIME (IN MINUTES) FOR A FLATBED TRUCK
 * * TO TRANSIT FROM TEMPORARY STAGING (PIER) TO
 * * OUTSIDE REPAIR SHOPS
 * * XHSTTRG,10 TIME (IN MINUTES) FOR A FLATBED TRUCK
 * * TO TRANSIT FROM TEMPORARY LOCATION (PIER) TO
 * * OUTSIDE REPAIR SHOPS
 * * XHSTTRM,9 MINIMUM NUMBER OF PALLETS REQUIRED
 * * FOR USE OF STRADDLE TRUCK
 * * XHSTTRM,7 MAXIMUM NUMBER OF PALLETS THAT
 * * STRADDLE TRUCK CAN CARRY
 * * XHSTTRK,2 TIME (IN MINUTES) FOR A STRADDLE TRUCK
 * * TO TRANSIT BETWEEN TEMPORARY STAGING
 * * (PIER) AND REPAIR SHOPS
 * * XHSTTRF,2 TIME (IN MINUTES) FOR A 4K OR 6K
 * * FORKLIFT TO LINE UP ONE PALLET FOR A STRADDLE TRUCK
 * * XHSTTRSA,2 TIME (IN MINUTES) FOR A SIDELOADER
 * * TO MOVE AN ELONGATED HEAVY BULKY RIPOUT ITEM FROM
 * * OUTSIDE REPAIR SHOPS TO INSIDE REPAIR SHOPS
 * * XHSTTRFA,7 TIME (IN MINUTES) FOR AN EQUAL TO OR
 * * GREATER THAN 10K FORKLIFT TO MOVE A NON-ELONGATED
 * * HEAVY BULKY RIPOUT ITEM FROM OUTSIDE REPAIR SHOPS
 * * TO INSIDE REPAIR SHOPS
 * * XHSTTRM,18 TIME (IN MINUTES) FOR AN EQUAL TO OR
 * * GREATER THAN 10K FORKLIFT TO UNLOAD ONE PALLETIZED
 * * RIPOUT ITEM FROM A FLATBED TRUCK OUTSIDE REPAIR
 * * SHOPS, MOVE THE PALLETIZED RIPOUT ITEM TO INSIDE
 * * REPAIR SHOPS, AND RETURN
 * * XHSTTRF,15 TIME (IN MINUTES) FOR A 4K OR 6K
 * * FORKLIFT TO MOVE ONE PALLETIZED RIPOUT ITEM FROM
 * * OUTSIDE REPAIR SHOPS TO INSIDE REPAIR SHOPS
 * * AND RETURN
 * * XHSTTRM,60 TIME (IN MINUTES) FOR A LESS THAN 4K
 * * PALLETIZED RIPOUT ITEM TO BE SERVICED BY REPAIR SHOPS
 * * XHSTTRM,60 TIME (IN MINUTES) FOR A BETWEEN
 * * 4K AND 6K PALLETIZED RIPOUT ITEM TO BE SERVICED
 * * BY REPAIR SHOPS
 * * XHSTTRM,60 TIME (IN MINUTES) FOR A GREATER THAN 6K
 * * PALLETIZED RIPOUT ITEM TO BE SERVICED BY REPAIR SHOPS
 * * XHSTTRM,60 TIME (IN MINUTES) FOR AN ELONGATED
 * * HEAVY BULKY RIPOUT ITEM TO BE SERVICED BY
 * * REPAIR SHOPS
 * * XHSTTRM,60 TIME (IN MINUTES) FOR A NON-ELONGATED
 * * HEAVY BULKY RIPOUT ITEM TO BE SERVICED BY
 * * REPAIR SHOPS
 * * MATRIX DEFINITIONS
 * * TBLA M,30,6
 * * COLUMN 1 = HOURS AT WHICH SHIP PREARRIVALS OCCUR
 * * (FOR STAGING OF TEMPORARY SERVICES NEAR PIER)
 * * COLUMN 2 = NUMBER OF SHIP PREARRIVALS OCCURRING AT HOUR
 * * SPECIFIED IN COLUMN 1
 * * COLUMN 3 = HOURS FOR PREARRIVAL STAGING OF TEMPORARY SERVICES
 * * CMTO PIER

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BLANK NUMBER	LOC	OPERATION	A,B,C,D,E,F,G,H,I,J	COMMENTS	CARD NUMBER
2	TBL8	MATRIX	M,3,4		165
		ROW 1 CONTAINS DATA FOR SHIP PREARRIVALS			166
		(1,1) = NUMBER OF PALLETIZED LOADS LESS THAN 4K			167
		(1,2) = NUMBER OF PALLETIZED LOADS BETWEEN 4K AND 6K			168
		(1,3) = NUMBER OF PALLETIZED LOADS GREATER THAN 6K			169
		(1,4) = NUMBER OF HEAVY BULKY LOADS			170
		ROW 2 CONTAINS DATA FOR RIPOUT ITEMS TO BE TRANSFERRED FROM			171
		LOWER DECK TO TEMPORARY LOCATION (PIER)			172
		(2,1) = NUMBER OF PALLETIZED RIPOUT ITEMS LESS THAN 4K			173
		(2,2) = NUMBER OF PALLETIZED RIPOUT ITEMS BETWEEN 4K AND 6K			174
		(2,3) = NUMBER OF PALLETIZED RIPOUT ITEMS GREATER THAN 6K			175
		(2,4) = NUMBER OF HEAVY BULKY RIPOUT ITEMS			176
		ROW 3 CONTAINS DATA FOR RIPOUT ITEMS TO BE TRANSFERRED FROM			177
		UPPER DECK TO TEMPORARY LOCATION (PIER)			178
		(3,1) = NUMBER OF PALLETIZED RIPOUT ITEMS LESS THAN 4K			179
		(3,2) = NUMBER OF PALLETIZED RIPOUT ITEMS BETWEEN 4K AND 6K			180
		(3,3) = NUMBER OF PALLETIZED RIPOUT ITEMS GREATER THAN 6K			181
		(3,4) = NUMBER OF HEAVY BULKY RIPOUT ITEMS			182
3	FILE	MATRIX	M,7,6		183
		(1,1) = TOTAL NUMBER OF PALLETIZED LOADS LESS THAN 4K			184
		TRANSFERRED NEAR PIER (TEMPORARY SERVICES)			185
		(1,2) = TOTAL NUMBER OF PALLETIZED LOADS BETWEEN 4K AND 6K			186
		TRANSFERRED NEAR PIER (TEMPORARY SERVICES)			187
		(1,3) = TOTAL NUMBER OF PALLETIZED LOADS GREATER THAN 6K			188
		TRANSFERRED NEAR PIER (TEMPORARY SERVICES)			189
		(1,4) = TOTAL NUMBER OF HEAVY BULKY LOADS			190
		TRANSFERRED NEAR PIER (TEMPORARY SERVICES)			191
		(1,5) = NUMBER OF PALLETIZED LOADS LESS THAN 4K TO BE			192
		TRANSFERRED NEAR PIER (TEMPORARY SERVICES)			193
		(1,6) = NUMBER OF PALLETIZED LOADS BETWEEN 4K AND 6K TO BE			194
		TRANSFERRED NEAR PIER (TEMPORARY SERVICES)			195
		(1,7) = NUMBER OF PALLETIZED LOADS GREATER THAN 6K TO BE			196
		TRANSFERRED NEAR PIER (TEMPORARY SERVICES)			197
		(1,8) = NUMBER OF HEAVY BULKY LOADS TO BE TRANSFERRED NEAR PIER			198
		(TEMPORARY SERVICES)			199
		(2,1) = TOTAL NUMBER OF PALLETIZED LOADS LESS THAN 4K			200
		TRANSFERRED ONTO PIER (TEMPORARY SERVICES)			201
		(2,2) = TOTAL NUMBER OF PALLETIZED LOADS BETWEEN 4K AND 6K			202
		TRANSFERRED ONTO PIER (TEMPORARY SERVICES)			203
		(2,3) = TOTAL NUMBER OF PALLETIZED LOADS GREATER THAN 6K			204
		TRANSFERRED ONTO PIER (TEMPORARY SERVICES)			205
		(2,4) = TOTAL NUMBER OF HEAVY BULKY LOADS TRANSFERRED			206
		ONTO PIER (TEMPORARY SERVICES)			207
		(2,5) = NUMBER OF PALLETIZED LOADS LESS THAN 4K TO BE			208
		TRANSFERRED ONTO PIER (TEMPORARY SERVICES)			209
		(2,6) = NUMBER OF PALLETIZED LOADS BETWEEN 4K AND 6K TO BE			210
		TRANSFERRED ONTO PIER (TEMPORARY SERVICES)			211
		(2,7) = NUMBER OF PALLETIZED LOADS GREATER THAN 6K TO BE			212
		TRANSFERRED ONTO PIER (TEMPORARY SERVICES)			213
		(2,8) = NUMBER OF HEAVY BULKY LOADS TO BE TRANSFERRED			214

APPENDIX B
WEAPONS SUPPLY MODEL SAMPLE RUN

GROUP NUMBER	OPERATION	ADDRESS	INITIAL	COMMENTS	CARD NUMBER
1	FLAAX EQU	14			2
1	FLAAX EQU	245			1
1	FLPH EQU	445			2
1	FLPH EQU	445			3
1	FLPH EQU	445			4
1	FLPH EQU	445			5
1	FLPH EQU	445			6
1	FLPH EQU	445			7
1	FLPH EQU	445			8
1	FLPH EQU	445			9
1	FLPH EQU	445			10
1	FLPH EQU	445			11
1	FLPH EQU	445			12
1	FLPH EQU	445			13
1	FLPH EQU	445			14
1	FLPH EQU	445			15
1	FLPH EQU	445			16
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1	FLPH EQU	445			46
1	FLPH EQU	445			47
1	FLPH EQU	445			48
1	FLPH EQU	445			49
1	FLPH EQU	445			50
1	FLPH EQU	445			51
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1	FLPH EQU	445			53
1	FLPH EQU	445			54

CARD
NUMBER

COMMENTS

BLOCK
NUMBER

OPERATION

A, B, C, D, E, F, G, H, I, J

INITIAL	X4SP1A,50C	FRACTION OF TIME TRUCK IS USED TO CARRY PALLETS INSTEAD OF STRADDLE TRUCK (EXPRESSED IN PARTS PER THOUSAND)	165
INITIAL	X4STANS,15	TIME (IN MINUTES) FOR A TRUCK TO TRANSIT FROM TEMPORARY STAGING (RECEIVING) TO WAREHOUSE TEMPORARY STORAGE	166
INITIAL	X4STANS,15	TIME (IN MINUTES) FOR A TRUCK TO TRANSIT FROM MATERIAL RECEIVING TO WAREHOUSE TEMPORARY STORAGE	167
INITIAL	X4STANS,15	TIME (IN MINUTES) FOR A TRUCK TO TRANSIT FROM CONSOLIDATION STAGING (ISSUING) TO TEMPORARY STAGING (PACKING AND SHIPPING)	168
INITIAL	X4STPL7,1	TIME (IN MINUTES) TO PALLETIZE ONE PALLET EQUIVALENT OF CARGO	169
INITIAL	X4SPKPA,10	TIME (IN MINUTES) TO PACK AND PACKAGE A HEAVY BULKY ITEM AT CONSOLIDATION STAGING (OUTSIDE WAREHOUSE)	170
INITIAL	X4SPKPD,20	TIME (IN MINUTES) TO PACKAGE ONE PALLETIZED ITEM	171
INITIAL	X4STMIN,7	MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF STRADDLE TRUCK	172
INITIAL	X4STPA,9	MAXIMUM NUMBER OF PALLETS THAT STRADDLE TRUCK CAN CARRY	173
INITIAL	X4STMIN,5	MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF TRUCK	174
INITIAL	X4STPA,7	MAXIMUM NUMBER OF PALLETS THAT TRUCK CAN CARRY	175
INITIAL	X4STMIN,5	MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF CONTAINER/CONTAINER TRUCK	176
INITIAL	X4SCTPA,7	MAXIMUM NUMBER OF PALLETS THAT CONTAINER/CONTAINER TRUCK CAN CARRY	177
INITIAL	X4STLP,4,4	TIME (IN MINUTES) FOR A 4K OR 6K FORKLIFT TO LOAD A PALLET ONTO A TRUCK OR OFFLOAD A PALLET FROM A TRUCK	178
INITIAL	X4STPFC,1	TIME (IN MINUTES) FOR A 4K OR 6K FORKLIFT TO POSITION ONE PALLET FOR STRADDLE TRUCK	179
INITIAL	X4STPFC,30	TIME (IN MINUTES) FOR A GROUP OF CRANE TO UNLOAD A HEAVY BULKY ITEM FROM A TRUCK OR VICE VERSA	180
INITIAL	X4SPPL,100,3	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH NEED PACKING AND PACKAGING, AND GO TO TEMPORARY STAGING (PACKING AND SHIPPING)	181
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	182
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	183
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	184
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	185
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	186
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	187
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	188
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	189
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	190
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	191
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	192
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	193
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	194
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	195
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	196
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	197
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	198
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	199
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	200
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	201
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	202
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	203
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	204
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	205
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	206
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	207
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	208
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	209
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	210
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	211
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	212
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	213
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	214
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	215
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	216
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	217
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	218
INITIAL	X4SPSS,0	FRACTION OF PALLETS GOING TO OFF-STATION USERS WHICH DO NOT NEED PACKING AND PACKAGING, AND GO TO SHIPPING STAGING (PACKING AND SHIPPING)	219
INITIAL	X4SPSS,0	EXPRESSED IN PARTS PER THOUSAND	220

CARD
NUMBER

COMMENTS

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3

(1,1) = NUMBER OF TYPE 3 PALLETS CURRENTLY AT TEMPORARY LOCATION (RECEIVING) DESTINED FOR DTG
 (1,2) = NUMBER OF TYPE 3 PALLETS CURRENTLY AT TEMPORARY LOCATION (RECEIVING) DESTINED FOR DTG
 (1,3) = NUMBER OF TYPE 3 PALLETS CURRENTLY AT TEMPORARY LOCATION (RECEIVING) DESTINED FOR DTG
 (2,1) = NUMBER OF PALLETS CURRENTLY AT TEMPORARY STAGING (PACKING AND SHIPPING)
 (2,2) = NUMBER OF PALLETS CURRENTLY AT SHIPPING OFF-STATION USERS
 (2,3) = NUMBER OF PALLETS CURRENTLY AT SHIPPING OFF-STATION USERS
 (3,1) = NUMBER OF PALLETS CURRENTLY AT TEMPORARY STAGING (RECEIVING) DESTINED FOR DTG
 (3,2) = NUMBER OF PALLETS CURRENTLY AT TEMPORARY STAGING (RECEIVING) DESTINED FOR DTG
 (4,1) = TOTAL NUMBER OF PALLETS CURRENTLY AT TEMPORARY STAGING (RECEIVING) DESTINED FOR DTG
 (4,2) = NUMBER OF PALLETS CURRENTLY AT TEMPORARY STAGING (RECEIVING) DESTINED FOR DTG

BLOCK NUMBER	STATE	FUNCTION	ADDRESS	COMMENT	CARD NUMBER
1	*			PALLETS COMING INTO TEMPORARY STAGING (PACKING	605
2	*			AND SHIPPING) HELP TEMPORARY LOCATION (RECEIVING)	606
3	*			(204 IN)	607
4	*	COLUMN 3	=	ACCUMULATED NUMBER OF PALLETS GOING FROM TEMPORARY	608
5	*			STAGING (RECEIVING) TO OFF- (201 OUT)	609
6	*	COLUMN 4	=	ACCUMULATED NUMBER OF PALLETS GOING FROM TEMPORARY	610
7	*			STAGING (RECEIVING) TO WAREHOUSE TEMPORARY STORAGE	611
8	*			(201 OUT)	612
9	*	COLUMN 5	=	ACCUMULATED NUMBER OF PALLETS COMING INTO WAREHOUSE	613
10	*			TEMPORARY STORAGE FROM TEMPORARY STAGING (RECEIVING)	614
11	*			(202 IN)	615
12	*	COLUMN 10	=	ACCUMULATED NUMBER OF PALLETS GOING FROM WAREHOUSE	616
13	*			TEMPORARY STORAGE INTO MATERIAL WAREHOUSING (RINS)	617
14	*			(202 OUT)	618
15	*	COLUMN 6	=	ACCUMULATED NUMBER OF ELONGATED HEAVY BULKY ITEMS	619
16	*			GOING INTO WAREHOUSE (202 IN)	620
17	*	COLUMN 7	=	ACCUMULATED NUMBER OF NON-ELONGATED HEAVY BULKY	621
18	*			ITEMS GOING INTO WAREHOUSE (202 IN)	622
19	*	COLUMN 8	=	ACCUMULATED NUMBER OF HEAVY BULKY ITEMS TO BE	623
20	*			STORED OUTSIDE OF WAREHOUSE (202 IN)	624
21	*	COLUMN 11	=	ACCUMULATED NUMBER OF ELONGATED HEAVY BULKY ITEMS	625
22	*			GOING FROM TEMPORARY STORAGE (WAREHOUSE) TO	626
23	*			MATERIAL WAREHOUSING (RINS) (202 OUT)	627
24	*	COLUMN 12	=	ACCUMULATED NUMBER OF NON-ELONGATED HEAVY BULKY	628
25	*			ITEMS GOING FROM TEMPORARY STORAGE (WAREHOUSE)	629
26	*			TO MATERIAL WAREHOUSING (RINS) (202 OUT)	630
27	*	COLUMN 13	=	ACCUMULATED NUMBER OF HEAVY BULKY ITEMS STORED	631
28	*			OUTSIDE WAREHOUSE (202 OUT)	632
29	*	COLUMN 14	=	ACCUMULATED NUMBER OF PALLETS COMING INTO	633
30	*			CONSOLIDATION STAGING (ISSUING) FROM	634
31	*			MATERIAL WAREHOUSING (202 IN)	635
32	*	COLUMN 17	=	ACCUMULATED NUMBER OF PALLETS GOING FROM	636
33	*			CONSOLIDATION STAGING (ISSUING) TO TEMPORARY	637
34	*			STAGING (PACKING AND SHIPPING) VIA TRUCK	638
35	*			(202 OUT)	639
36	*	COLUMN 16	=	ACCUMULATED NUMBER OF PALLETS GOING FROM	640
37	*			CONSOLIDATION STAGING (ISSUING) TO TEMPORARY	641
38	*			STAGING (PACKING AND SHIPPING) VIA STRADDLE	642
39	*			TRUCK (202 OUT)	643
40	*	COLUMN 15	=	ACCUMULATED NUMBER OF HEAVY BULKY ITEMS COMING	644
41	*			INTO CONSOLIDATION STAGING (ISSUING) FROM	645
42	*			MATERIAL WAREHOUSING (FROM OFF-STATION USERS) (202 IN)	646
43	*	COLUMN 19	=	ACCUMULATED NUMBER OF HEAVY BULKY ITEMS GOING	647
44	*			OUT OF CONSOLIDATION STAGING (ISSUING) TO	648
45	*			CUSTOMER (OFF-STATION) (202 OUT)	649
46	*	COLUMN 26	=	ACCUMULATED NUMBER OF PALLETS (OR EQUIVALENTS)	650
47	*			COMING INTO TEMPORARY STAGING (PACKING AND	651
48	*			SHIPPING) FROM TENANTS (204 IN)	652
49	*	COLUMN 25	=	ACCUMULATED NUMBER OF NON-CONTAINERIZED PALLETS	653
50	*			GOING FROM SHIPPING STAGING (PACKING AND SHIPPING)	654
51	*			TO CUSTOMERS (OFF-STATION) (204 OUT)	655
52	*	COLUMN 30	=	ACCUMULATED NUMBER OF PALLETS GOING INTO CONTAINERS	656
53	*			AT SHIPPING STAGING (PACKING AND SHIPPING) TO GO	657
54	*			TO CUSTOMERS (OFF-STATION) (204 OUT)	658
55	*	COLUMN 20	=	ACCUMULATED NUMBER OF PALLETS GOING FROM	659

CARD
NUMBER

BLOCK NUMBER	LOC	OP	ATION	4,3,5,6,7,8,9,10,11	COMMENTS	CARD NUMBER
•	•	•	•	•	PALLETS COMING INTO TEMPORARY STAGING (PACKING AND SHIPPING) FROM TEMPORARY LOCATION (RECEIVING) (204 IN)	605
•	•	•	•	•	COLUMN 3 = ACCUMULATED NUMBER OF PALLETS GOING FROM TEMPORARY STAGING (RECEIVING) TO DTD (201 OUT)	606
•	•	•	•	•	COLUMN 4 = ACCUMULATED NUMBER OF PALLETS GOING FROM TEMPORARY STAGING (RECEIVING) TO WAREHOUSE TEMPORARY STORAGE (201 OUT)	607
•	•	•	•	•	COLUMN 5 = ACCUMULATED NUMBER OF PALLETS COMING INTO WAREHOUSE TEMPORARY STORAGE FROM TEMPORARY STAGING (RECEIVING) (202 IN)	608
•	•	•	•	•	COLUMN 10 = ACCUMULATED NUMBER OF PALLETS GOING FROM WAREHOUSE TEMPORARY STORAGE INTO MATERIAL WAREHOUSING (INIS) (202 OUT)	609
•	•	•	•	•	COLUMN 6 = ACCUMULATED NUMBER OF ELONGATED HEAVY BULKY ITEMS GOING INTO WAREHOUSE (202 IN)	610
•	•	•	•	•	COLUMN 7 = ACCUMULATED NUMBER OF NON-ELONGATED HEAVY BULKY ITEMS GOING INTO WAREHOUSE (202 IN)	611
•	•	•	•	•	COLUMN 9 = ACCUMULATED NUMBER OF HEAVY BULKY ITEMS TO 9c STORED OUTSIDE OF WAREHOUSE (202 IN)	612
•	•	•	•	•	COLUMN 11 = ACCUMULATED NUMBER OF ELONGATED HEAVY BULKY ITEMS GOING FROM TEMPORARY STORAGE (WAREHOUSE) TO MATERIAL WAREHOUSING (INIS) (202 OUT)	613
•	•	•	•	•	COLUMN 12 = ACCUMULATED NUMBER OF NON-ELONGATED HEAVY BULKY ITEMS GOING FROM TEMPORARY STORAGE (WAREHOUSE) TO MATERIAL WAREHOUSING (INIS) (202 OUT)	614
•	•	•	•	•	COLUMN 13 = ACCUMULATED NUMBER OF HEAVY BULKY ITEMS STORED OUTSIDE WAREHOUSE (202 OUT)	615
•	•	•	•	•	COLUMN 14 = ACCUMULATED NUMBER OF PALLETS COMING INTO CONSOLIDATION STAGING (ISSUING) FROM MATERIAL WAREHOUSING (202 IN)	616
•	•	•	•	•	COLUMN 17 = ACCUMULATED NUMBER OF PALLETS COMING FROM CONSOLIDATION STAGING (ISSUING) TO TEMPORARY STAGING (PACKING AND SHIPPING) VIA TRUCK (202 OUT)	617
•	•	•	•	•	COLUMN 15 = ACCUMULATED NUMBER OF PALLETS GOING FROM CONSOLIDATION STAGING (ISSUING) TO TEMPORARY STAGING (PACKING AND SHIPPING) VIA STRADDLE TRUCK (202 OUT)	618
•	•	•	•	•	COLUMN 16 = ACCUMULATED NUMBER OF HEAVY BULKY ITEMS COMING INTO CONSOLIDATION STAGING (ISSUING) FROM MATERIAL WAREHOUSING (FROM DDP-STATION USER) (202 IN)	619
•	•	•	•	•	COLUMN 19 = ACCUMULATED NUMBER OF HEAVY BULKY ITEMS GOING OUT OF CONSOLIDATION STAGING (ISSUING) TO CUSTOMER (CUSTOMER) (202 OUT)	620
•	•	•	•	•	COLUMN 26 = ACCUMULATED NUMBER OF PALLETS (IN EQUIVALENTS) COMING INTO TEMPORARY STAGING (PACKING AND SHIPPING) FROM TENANTS (204 IN)	621
•	•	•	•	•	COLUMN 29 = ACCUMULATED NUMBER OF NON-CONTAINERIZED PALLETS GOING FROM SHIPPING STAGING (PACKING AND SHIPPING) TO CUSTOMERS (CUSTOMER) (204 OUT)	622
•	•	•	•	•	COLUMN 30 = ACCUMULATED NUMBER OF PALLETS COMING INTO CONTAINERS AT SHIPPING STAGING (PACKING AND SHIPPING) TO CUSTOMERS (CUSTOMER) (204 OUT)	623
•	•	•	•	•	COLUMN 20 = ACCUMULATED NUMBER OF PALLETS GOING FROM	624

ALOG NUMBER	LOC	OPERATION	Address:xxxxxx	COMMENTS	CARD NUMBER
•	•	•	•	CONSOLIDATED STAGING (ISSUING) TO ON-STATION	660
•	•	•	•	USERS VIA STRADOLE TRUCK (202 OUT)	661
•	•	•	•	COLUMN 21 = ACCUMULATED NUMBER OF PALLETS GOING FROM	662
•	•	•	•	CONSOLIDATION STAGING (ISSUING) TO ON-STATION	663
•	•	•	•	USERS VIA TRUCK (202 OUT)	664
•	•	•	•	COLUMN 16 = ACCUMULATED NUMBER OF HEAVY BULKY ITEMS GOING	665
•	•	•	•	FROM MATERIAL WAREHOUSING TO CONSOLIDATION	666
•	•	•	•	STAGING (FOR ON-STATION USERS) (202 IN)	667
•	•	•	•	COLUMN 22 = ACCUMULATED NUMBER OF HEAVY BULKY ELONGATED	668
•	•	•	•	ITEMS REMOVED FROM WAREHOUSE GOING TO	669
•	•	•	•	ON-STATION USERS (202 OUT)	670
•	•	•	•	COLUMN 23 = ACCUMULATED NUMBER OF HEAVY BULKY NON-ELONGATED	671
•	•	•	•	ITEMS REMOVED FROM WAREHOUSE GOING TO	672
•	•	•	•	ON-STATION USERS (202 OUT)	673
•	•	•	•	COLUMN 24 = ACCUMULATED NUMBER OF HEAVY BULKY ITEMS OUTSIDE	674
•	•	•	•	WAREHOUSE, GOING TO ON-STATION USERS (202 OUT)	675
•	•	•	•	COLUMN 4 = ACCUMULATED NUMBER OF "POD AND FOOT ONLY"	676
•	•	•	•	PALLETS COMING INTO WAREHOUSE TEMPORARY	677
•	•	•	•	STAGING FROM MATERIAL RECEIVING (202 IN)	678
•	•	•	•	COLUMN 27 = ACCUMULATED NUMBER OF PALLETS CLIPPING INTO TEMPORARY	679
•	•	•	•	STAGING (PACKING AND SHIPPING) FROM CONSOLIDATION	680
•	•	•	•	STAGING (ISSUING) VIA STRADOLE TRUCKS (204 IN)	681
•	•	•	•	COLUMN 28 = ACCUMULATED NUMBER OF PALLETS COMING INTO TEMPORARY	682
•	•	•	•	STAGING (PACKING AND SHIPPING) FROM CONSOLIDATION	683
•	•	•	•	STAGING (ISSUING) VIA PLATRED TRUCKS (204 IN)	684
•	•	•	•	INITIAL MATRIX Y,5,216 END: PALL UTILIZATION MATRIX	685
•	•	•	•	•	686
•	•	•	•	•	687
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•	•	•	•	•	714

MATRIX INITIALIZATIONS:

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INITIAL      M4STBLA(1,1),0/M4STBLA(2,1),1
INITIAL      M4STBLA(3,1),2/M4STBLA(4,1),3
INITIAL      M4STBLA(5,1),4/M4STBLA(6,1),5
INITIAL      M4STBLA(7,1),6/M4STBLA(8,1),7
INITIAL      M4STBLA(9,1),8/M4STBLA(10,1),9
INITIAL      M4STBLA(11,1),10/M4STBLA(12,1),11
INITIAL      M4STBLA(13,1),12/M4STBLA(14,1),13
INITIAL      M4STBLA(15,1),14/M4STBLA(16,1),15
INITIAL      M4STBLA(17,1),16/M4STBLA(18,1),17
INITIAL      M4STBLA(19,1),18/M4STBLA(20,1),19
INITIAL      M4STBLA(21,1),20/M4STBLA(22,1),21
INITIAL      M4STBLA(23,1),22/M4STBLA(24,1),23
INITIAL      M4STBLA(1-2),23/M4STBLA(3-4),23,2
INITIAL      M4STBLA(1-10),23/M4STBLA(11-16),23,2
INITIAL      M4STBLA(17-18),23/M4STBLA(19-24),23,2
INITIAL      M4STBLA(1,3),1/M4STBLA(1,4),3
INITIAL      M4STBLA(1,5),1/M4STBLA(1,6),3
INITIAL      M4STBLA(1,3),2/M4STBLA(2,3),10
INITIAL      M4STBLA(1,3),19
INITIAL      M4STBLA(1-3),4,3
INITIAL      M4STBLA(12,1),18
INITIAL      M4STBLA(11,1),2/M4STBLA(2,5),10
INITIAL      M4STBLA(3,5),13
INITIAL      M4STBLA(1-3),6,2
INITIAL      M4STBLA(3,1-3),6
    
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SINCE VALUE INPUT PARAMETERS ARE DEFINED BY USER FOR THIS RUN
 LISTING OF CONDITIONS ARE TO BE FOUND AT THE INDICATED CASE NUMBERS IN THE MAIN PROGRAM LISTING

ICL01	24	(CARD 59)	NUMBER OF ENTRIES IN COLUMN 1 OF TOLA
ICL03	3	(CARD 60)	NUMBER OF ENTRIES IN COLUMN 3 OF TOLA
ICL05	3	(CARD 61)	NUMBER OF ENTRIES IN COLUMN 5 OF TOLA
ICL07	32	(CARD 62)	NUMBER OF ENTRIES IN COLUMN 7 OF TOLA
ICL09	24	(CARD 63)	NUMBER OF ENTRIES IN COLUMN 9 OF TOLA
ICL11	12	(CARD 64)	NUMBER OF ENTRIES IN COLUMN 11 OF TOLA
ICL13	12	(CARD 65)	NUMBER OF ENTRIES IN COLUMN 13 OF TOLA
ICL15	3	(CARD 66)	TIME (IN MINUTES) FOR CONTAINER HANDLER TO LOAD/OFFLOAD CONTAINER(S) FROM TRUCK
ICL17	3	(CARD 67)	INPUT 1 IF ALL FUNCTIONS ARE ADJACENT TO EACH OTHERS INPUT 0 IF OTHERWISE
ICL19	3	(CARD 68)	INPUT 1 TO USE COMMUNITY FACILITIES INPUT 0 IF OTHERWISE
ICL21	3	(CARD 69)	1 IF CONTR. TRUCK USED TO OLIVE PALLETS FROM P AND S TO OFF-STATION USER; 0 IF NON-CONTR.
ICL23	700	(CARD 70)	FRACTION OF TIME GROUP 210 FL IS USED INSTEAD OF GROUP 110 FL (AT RECEIVING)
ICL25	200	(CARD 71)	FRACTION OF TIME GROUP 110 FL IS USED INSTEAD OF GROUP 210 FL (AT RECEIVING)
ICL27	4	(CARD 72)	TIME (IN MIN) FOR A 4X76K FL TO OFFLOAD PALLET FROM TRUCK AND RETURN (AT RECEIVING)
ICL29	4	(CARD 73)	TIME (IN MINUTES) FOR A 4X76K FL TO MOVE PALLET FROM RECEIVING TO P AND S AND RETURN
ICL31	4	(CARD 74)	TIME (IN MINUTES) FOR A 4X76K FL TO LOAD PALLET INTO CONTAINER
ICL33	4	(CARD 75)	TIME (IN MIN) FOR A 4X76K FL TO MOVE PALLET WITHIN RECEIVING AREA
ICL35	4	(CARD 76)	TIME (IN MIN) FOR A 4X76K FL TO MOVE PALLET WITHIN WAREHOUSE AREA (INPUT)
ICL37	4	(CARD 77)	TIME (IN MIN) FOR A 4X76K FL TO UNLOAD PALLET FROM TRUCK AT WAREHOUSE
ICL39	4	(CARD 78)	TIME (IN MIN) FOR A 4X76K FL TO MOVE PALLET WITHIN WAREHOUSE AREA (OUTPUT)
ICL41	4	(CARD 79)	TIME (IN MINUTES) FOR A 4X76K FL TO OFFLOAD PALLET AT P AND S
ICL43	4	(CARD 80)	TIME (IN MINUTES) FOR A 4X76K FL TO MOVE PALLET WITHIN P AND S (TO P AND P)
ICL45	4	(CARD 81)	TIME (IN MINUTES) FOR A 4X76K FL TO MOVE PALLET WITHIN P AND S (TO SHIPPING STG)
ICL47	1000	(CARD 82)	FRACTION OF TIME GROUP 21 FL IS USED INSTEAD OF GROUP 11 FL (AT RECEIVING)
ICL49	700	(CARD 83)	FRACTION OF TIME GROUP 11 FL IS USED INSTEAD OF GROUP 21 FL (AT RECEIVING)
ICL51	240	(CARD 84)	FRACTION OF TIME GROUP 22 FL IS USED INSTEAD OF GROUP 12 FL (AT RECEIVING)
ICL53	700	(CARD 85)	FRACTION OF TIME GROUP 12 FL IS USED INSTEAD OF GROUP 22 FL (AT RECEIVING)
ICL55	4	(CARD 86)	FRACTION OF TIME GROUP 24 FL IS USED INSTEAD OF GROUP 14 FL (AT P AND S)
ICL57	4	(CARD 87)	FRACTION OF TIME GROUP 14 FL IS USED INSTEAD OF GROUP 24 FL (AT P AND S)
ICL59	4	(CARD 88)	FRACTION OF TIME GROUP 28 FL IS USED INSTEAD OF GROUP 16 FL (AT RECEIVING)
ICL61	300	(CARD 89)	FRACTION OF TIME GROUP 16 FL IS USED INSTEAD OF GROUP 28 FL (AT RECEIVING)
ICL63	500	(CARD 90)	FRACTION OF TIME STRADDLE TRUCK IS USED TO CARRY PALLETS INSTEAD OF TRUCK
ICL65	15	(CARD 91)	TIME (IN MINUTES) FOR TRUCK TO TRANSIT FROM STAGING (RECEIVING) TO WAREHOUSE
ICL67	15	(CARD 92)	TIME (IN MINUTES) FOR TRUCK TO TRANSIT FROM MATERIAL RECEIVING TO WAREHOUSE
ICL69	15	(CARD 93)	TIME (IN MINUTES) FOR TRUCK TO TRANSIT FROM ISSUING TO PACKING AND SHIPPING
ICL71	1	(CARD 94)	TIME (IN MINUTES) TO PALLETIZE ONE PALLET EQUIVALENT OF CARGO
ICL73	10	(CARD 95)	TIME (IN MINUTES) TO PACK AND PACKAGE ONE HEAVY BULKY ITEM
ICL75	20	(CARD 96)	TIME (IN MINUTES) TO PACKAGE ONE PALLETIZED ITEM
ICL77	7	(CARD 97)	MINIMUM NUMBER OF PALLETS REQUIRED TO USE STRADDLE TRUCK
ICL79	7	(CARD 98)	MAXIMUM NUMBER OF PALLETS STRADDLE TRUCK CAN CARRY
ICL81	7	(CARD 99)	MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF TRUCK
ICL83	7	(CARD 100)	MAXIMUM NUMBER OF PALLETS TRUCK CAN CARRY
ICL85	7	(CARD 101)	MINIMUM NUMBER OF PALLETS REQUIRED FOR USED OF CONTAINER TRUCK
ICL87	7	(CARD 102)	MAXIMUM NUMBER OF PALLETS CONTAINER TRUCK CAN CARRY
ICL89	4	(CARD 103)	TIME (IN MINUTES) FOR 4X76K FL TO LOAD/OFFLOAD PALLET FROM TRUCK
ICL91	1	(CARD 104)	TIME (IN MINUTES) FOR A 4X76K FL TO POSITION PALLET FOR STRADDLE TRUCK
ICL93	30	(CARD 105)	TIME (IN MINUTES) FOR GROUP 52 CRANE TO LOAD/UNLOAD HEAVY BULKY ITEM FROM TRUCK
ICL95	1000	(CARD 106)	FRACTION OF PALLETS GOING OFF STATION WHICH NEED PACKING AND PACKAGING
ICL97	0	(CARD 107)	FRACTION OF PALLETS GOING OFF STATION WHICH DO NOT NEED PACKING AND PACKAGING
ICL99	1	(CARD 108)	DELAY TIME (IN MINUTES) BETWEEN USE OF GROUP 52 CRANE AND GROUP 72 STRADDLE
ICL101	1	(CARD 109)	DELAY TIME (IN MINUTES) BETWEEN USE OF GROUP 52 CRANE AND GROUP 32 FORKLIFT

MATRIX TELA CONSISTS OF USER DEFINED INPUT VALUES
(DETAILS OF DEFINITIONS ARE TO BE FOUND AT THE INDICATED CASE NUMBERS IN THE MAIN PROGRAM LISTING)

COLUMN 1 (CARD 270) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING LIGHT BULKY/BOXES
COLUMN 2 (CARD 271) = NUMBER OF TRUCKS ARRIVING AT HOURS SPECIFIED IN COLUMN 1
COLUMN 3 (CARD 272) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING FOOT/HAZARDOUS (PALLETES)
COLUMN 4 (CARD 273) = NUMBER OF TRUCKS ARRIVING AT HOURS SPECIFIED IN COLUMN 3
COLUMN 5 (CARD 274) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY
COLUMN 6 (CARD 275) = NUMBER OF TRUCKS ARRIVING AT HOURS SPECIFIED IN COLUMN 5
COLUMN 7 (CARD 276) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY
COLUMN 8 (CARD 277) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY
COLUMN 9 (CARD 278) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY
COLUMN 10 (CARD 279) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY
COLUMN 11 (CARD 280) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY
COLUMN 12 (CARD 281) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY
COLUMN 13 (CARD 282) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY
COLUMN 14 (CARD 283) = HOURS TRUCKS ARRIVE AT RECEIVING CARRYING HEAVY BULKY

MATRIX TELA

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	C	3	2	3	2	2	1	1	0	3
2	1	3	10	3	10	2	2	1	1	3
3	2	2	10	3	10	2	2	1	1	3
4	3	2	C	0	C	0	0	1	1	3
5	4	2	C	C	C	0	0	1	1	3
6	5	2	C	C	C	0	0	1	1	3
7	6	2	C	C	C	0	0	1	1	3
8	7	2	C	C	C	0	0	1	1	3
9	8	2	C	C	C	0	0	1	1	3
10	9	2	C	C	C	0	0	1	1	3
11	10	2	C	C	C	0	0	1	1	3
12	11	2	C	C	C	0	0	1	1	3
13	12	2	C	C	C	0	0	1	1	3
14	13	2	C	C	C	0	0	1	1	3
15	14	2	C	C	C	0	0	1	1	3
16	15	2	C	C	C	0	0	1	1	3
17	16	2	C	C	C	0	0	1	1	3
18	17	2	C	C	C	0	0	1	1	3

DEMARCAPETH, PO, 700 4 C155 V/6000
 HALFORD MATRIX TBLA

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
10	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0

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HALFORD MATRIX TBLA

ROW/COLUMN	11	12	13	14
1	1	1	1	1
2	1	1	1	1
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	1	1	1	1
8	1	1	1	1
9	1	1	1	1
10	1	1	1	1
11	1	1	1	1
12	1	1	1	1
13	1	1	1	1
14	1	1	1	1
15	1	1	1	1
16	1	1	1	1
17	1	1	1	1
18	1	1	1	1
19	1	1	1	1
20	1	1	1	1
21	1	1	1	1
22	1	1	1	1
23	1	1	1	1
24	1	1	1	1
25	1	1	1	1
26	1	1	1	1
27	1	1	1	1
28	1	1	1	1
29	1	1	1	1
30	1	1	1	1

PARAMETER DESCRIPTIONS OF USER DEFINED INPUT VALUES
 INDICATED DEFINITIONS ARE TO BE PLACED AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING

- ELEMENT (1,1) (CARD 329) • INPUT 0 IF CARGO NOT CONTAINLIZED; INPUT 1 IF CARGO IS CONTAINERIZED
- ELEMENT (1,2) (CARD 331) • INPUT 0 IF LIGHT BULKY/BOXES ARE PALLETIZED; INPUT 1 IF NOT PALLETIZED
- ELEMENT (1,3) (CARD 333) • NUMBER OF PALLETS FOR DTD
- ELEMENT (1,4) (CARD 335) • NUMBER OF PALLETS FOR TRANSHIPMENT
- ELEMENT (1,5) (CARD 337) • NUMBER OF PALLETS FROM WAREHOUSE VIA NON-AUTOMATIC MHE
- ELEMENT (1,6) (CARD 340) • NUMBER OF PALLETS FROM WAREHOUSE VIA AUTOMATIC MHE
- ELEMENT (1,7) (CARD 343) • NUMBER OF NON-ELONGATED PALLETS
- ELEMENT (1,8) (CARD 344) • NUMBER OF ELONGATED HEAVY BULKY TO STORE IN WAREHOUSE
- ELEMENT (1,9) (CARD 347) • NUMBER OF NON-ELONGATED HEAVY BULKY TO STORE IN WAREHOUSE
- ELEMENT (1,10) (CARD 350) • NUMBER OF HEAVY BULKY TO STORE OUTSIDE WAREHOUSE
- ELEMENT (1,11) (CARD 353) • NUMBER OF PALLETS ISSUED FROM WAREHOUSE GOING TO OFF-STATION USERS (VIA NON-AUTOMATED SYSTEM)
- ELEMENT (1,12) (CARD 358) • NUMBER OF PALLETS ISSUED FROM WAREHOUSE GOING TO ON-STATION USERS (VIA NON-AUTOMATED SYSTEM)
- ELEMENT (1,13) (CARD 363) • NUMBER OF PALLETS ISSUED FROM WAREHOUSE GOING TO OFF-STATION USERS (VIA AUTOMATED SYSTEM)
- ELEMENT (1,14) (CARD 368) • NUMBER OF PALLETS ISSUED FROM WAREHOUSE GOING TO ON-STATION USERS (VIA AUTOMATED SYSTEM)
- ELEMENT (1,15) (CARD 373) • NUMBER OF PALLETS ARRIVING AT PACKING AND SHIPPING FROM TENANTS
- ELEMENT (1,16) (CARD 378) • INPUT 0 IF (1,11) IS PALLETIZED; INPUT 1 IF NOT PALLETIZED
- ELEMENT (1,17) (CARD 384) • NUMBER OF ELONGATED HEAVY BULKY ITEMS ISSUED FROM WAREHOUSE GOING TO OFF-STATION USERS
- ELEMENT (1,18) (CARD 386) • NUMBER OF NON-ELONGATED HEAVY BULKY ITEMS ISSUED FROM WAREHOUSE GOING TO OFF-STATION USERS
- ELEMENT (1,19) (CARD 392) • NUMBER OF HEAVY BULKY ITEMS STORED OUTSIDE WAREHOUSE GOING TO OFF-STATION USERS
- ELEMENT (1,20) (CARD 396) • NUMBER OF ELONGATED HEAVY BULKY ITEMS ISSUED FROM WAREHOUSE GOING TO ON-STATION USERS
- ELEMENT (1,21) (CARD 400) • NUMBER OF NON-ELONGATED HEAVY BULKY ITEMS ISSUED FROM WAREHOUSE GOING TO ON-STATION USERS
- ELEMENT (1,22) (CARD 404) • NUMBER OF HEAVY BULKY ITEMS STORED OUTSIDE WAREHOUSE GOING TO ON-STATION USERS

WAREHOUSE MATI-ITY Table

ROW/COLUMN	1	2	3	4	5	6
1	C	0	C	3	11	3
2	14	0	C	C	C	0
3	6	4	6	C	C	0
4	32	48	C	12	C	0
5	1	1	C	0	C	0
6	2	2	2	0	C	0
7	1	1	1	C	C	0

MATRIX AVAL TO THE INPUT-OUTPUT MATRIX (FOR GENERAL EXPLANATION SEE CARD NUMBER 664)
(CERTAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBER IN THE MAIN PROGRAM LISTING)

INPUTS TO RECEIVING

COLUMN 1 = NUMBER OF PALLETS INTO RECEIVING (CARD 544)

OUTPUTS FROM RECEIVING

COLUMN 2 = NUMBER OF PALLETS FROM RECEIVING TO PACKING AND SHIPPING (TRANSHIPMENT) (CARD 598)

COLUMN 3 = NUMBER OF PALLETS FROM RECEIVING TO OFF (CARD 502)

COLUMN 4 = NUMBER OF PALLETS FROM RECEIVING TO WAREHOUSE (CARD 608)

INPUTS TO STORAGE

COLUMN 5 = NUMBER OF PALLETS FROM RECEIVING ARRIVING AT WAREHOUSE (CARD 611)

COLUMN 6 = NUMBER OF ELONGATED HEAVY BULKY GOING INTO WAREHOUSE (CARD 617)

COLUMN 7 = NUMBER OF NON-ELONGATED HEAVY BULKY GOING INTO WAREHOUSE (CARD 616)

COLUMN 8 = NUMBER OF HEAVY BULKY STOCKED OUTSIDE WAREHOUSE (CARD 621)

COLUMN 9 = NUMBER OF PALLETS RECEIVED FROM RECEIVING INTO WAREHOUSE (CARD 674)

OUTPUTS FROM STORAGE

COLUMN 10 = NUMBER OF PALLETS INTO WAREHOUSE BINS (CARD 614)

COLUMN 11 = NUMBER OF ELONGATED HEAVY BULKY INTO WAREHOUSE BINS (CARD 623)

COLUMN 12 = NUMBER OF NON-ELONGATED HEAVY BULKY INTO WAREHOUSE BINS (CARD 626)

COLUMN 13 = NUMBER OF HEAVY BULKY STOCKED OUTSIDE WAREHOUSE (CARD 624)

INPUTS TO ISSUING

COLUMN 14 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED (CARD 631)

COLUMN 15 = NUMBER OF HEAVY BULKY FROM WAREHOUSE TO BE ISSUED FOR OFF-STATION (CARD 642)

COLUMN 16 = NUMBER OF HEAVY BULKY FROM WAREHOUSE TO BE ISSUED FOR ON-STATION (CARD 663)

OUTPUTS FROM ISSUING

COLUMN 17 = NUMBER OF PALLETS ISSUED FROM WAREHOUSE TO PACKING AND SHIPPING VIA TRUCK (CARD 634)

COLUMN 18 = NUMBER OF PALLETS ISSUED FROM WAREHOUSE TO PACKING AND SHIPPING VIA STRADDLE TRUCK (CARD 638)

COLUMN 19 = NUMBER OF HEAVY BULKY ISSUED FROM WAREHOUSE TO OFF-STATION USERS (CARD 649)

COLUMN 20 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED FOR ON-STATION VIA STRADDLE TRUCK (CARD 657)

COLUMN 21 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED FOR ON-STATION VIA TRUCK (CARD 660)

COLUMN 22 = NUMBER OF ELONGATED HEAVY BULKY ISSUED FROM WAREHOUSE TO ON-STATION USERS (CARD 666)

COLUMN 23 = NUMBER OF NON-ELONGATED HEAVY BULKY ISSUED FROM WAREHOUSE TO ON-STATION USERS (CARD 669)

COLUMN 24 = NUMBER OF HEAVY BULKY ISSUED FROM OUTSIDE WAREHOUSE TO ON-STATION USERS (CARD 672)

INPUTS TO PACKING AND SHIPPING

COLUMN 25 = NUMBER OF PALLETS FROM RECEIVING INTO PACKING AND SHIPPING (TRANSHIPMENT) (CARD 602)

COLUMN 26 = NUMBER OF PALLETS FROM TENANTS TO PACKING AND SHIPPING (CARD 648)

COLUMN 27 = NUMBER OF PALLETS FROM WAREHOUSE INTO PACKING AND SHIPPING VIA STRADDLE TRUCK (CARD 677)

COLUMN 28 = NUMBER OF PALLETS INTO PACKING AND SHIPPING FROM WAREHOUSE (CARD 680)

OUTPUTS FROM PACKING AND SHIPPING

COLUMN 29 = NUMBER OF NON-CONTAINERIZED PALLETS FROM PACKING AND SHIPPING TO OFF-STATION (CARD 651)

COLUMN 30 = NUMBER OF CONTAINERIZED PALLETS FROM PACKING AND SHIPPING TO OFF-STATION (CARD 654)

HALFWORD MATRIX 4441

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	356	54	127	317	317	12	12	12	54	371
2	0	0	0	0	0	0	0	0	0	0

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HALFWORD MATRIX AAA1

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0

HALFWORD MATRIX AAA1

ROW/COLUMN	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0

HALFWORD MATRIX AAA1

ROW/COLUMN	21	22	23	24	25	26	27	28	29	30
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0

CARD
NUMBER

2869
2890

COMMENTS

RESET FOR DAY 2
START FOR 11H MAY 2

ABOLISHED

1000000000

UP-DATUM

RESET
START

05/04/67

PSK 526

VLP. 1-3

CAN CPSS V/6000

CPSS V/6000

DETAILED EQUIPMENT DEFINITIONS AND UTILIZATION AT THE INDICATED CASE NUMBERS IN THE MAIN PROGRAM LISTING

CMEM = CONTAINER HANDLING (CARD 63) (CARD 17)
 FLAP = 4K FL (CAP 210) COMMUNITY: USED AT RECEIVING, PARE SP STORAGE, AND ISSUING (ALL ADJACENT) (CARD 16)
 FLAP = 4K FL (CAP 110) COMMUNITY: USED AT RECEIVING, PARE SP STORAGE, AND ISSUING (ALL ADJACENT) (CARD 22)
 FLAP = 4K FL (CAP 25) COMMUNITY: USED AT RECEIVING AND SHIPPING (ADJACENT) (CARD 24)
 FLAP = 4K FL (CAP 10) COMMUNITY: USED AT RECEIVING AND SHIPPING (ADJACENT) (CARD 25)
 FLA = 4K FL (CAP 21) USED AT RECEIVING (CARD 32)
 FLA = 4K FL (CAP 11) USED AT RECEIVING (CARD 34)
 FLA = 4K FL (CAP 22) USED AT WAREHOUSE (CARD 34)
 FLA = 4K FL (CAP 12) USED AT WAREHOUSE (CARD 34)
 FLA = 4K FL (CAP 24) USED AT PACKING AND SHIPPING (CARD 40)
 FLA = 4K FL (CAP 14) USED AT PACKING AND SHIPPING (CARD 42)
 FLA = 10K FL (CAP 32) USED AT WAREHOUSE (CARD 44)
 CLE = 10K CRANE (CAP 52) USED AT WAREHOUSE (CARD 46)
 SLEB = SIMULATED (CAP 72) USED AT WAREHOUSE (CARD 48)
 JTR = STANDARD TRUCK

PMF EQUIPMENT UTILIZATION (NAVAL SUPPLY CENTER, CHARLESTON)

EQUIPMENT	CAPACITY	NUMBER AVAILABLE	AVERAGE NUMBER USED	UTILIZATION	TOTAL NUMBER OF TIMES USED	AVERAGE TIME USED (MINUTES)	NUMBER CURRENTLY IN USE	MAXIMUM NUMBER USED
STORAGE			AVERAGE CONTENTS	AVERAGE UTILIZATION	ENTRIES	AVERAGE TIME/TXN	CURRENT CONTENTS	MAXIMUM CONTENTS
FLA	16		9.290	0.561	513	4.084	2	16
FLB	33		12.273	0.372	669	6.550	0	33
FLC	14		5.214	0.373	248	6.406	0	14
FLD	16		5.773	0.304	462	5.998	1	19
FLA	6		2.060	0.343	164	6.030	1	6
FLC	2		0.062	0.031	5	6.000	0	1
CLE	1		0.750	0.750	13	27.692	1	1
SLEB	2		0.125	0.062	15	4.000	0	2
JTR	13		5.027	0.407	59	26.517	4	13

TOTAL NUMBER OF PIECES OF EQUIPMENT = 105
 OVERALL UTILIZATION = 36 PERCENT

SINGLE VALUE INPUT PARAMETERS ARE OBTAINED BY USING FOR THIS RUN
 (CONTAINING THE INPUTS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

IBLAI =	24	(CARD 59) = NUMBER OF ENTRIES IN COLUMN 1 OF TALA	
IBLAI =	3	(CARD 60) = NUMBER OF ENTRIES IN COLUMN 3 OF TALA	
IBLAI =	3	(CARD 61) = NUMBER OF ENTRIES IN COLUMN 5 OF TALA	
IBLAI =	14	(CARD 62) = NUMBER OF ENTRIES IN COLUMN 7 OF TALA	
IBLAI =	24	(CARD 63) = NUMBER OF ENTRIES IN COLUMN 9 OF TALA	
IBLAI =	15	(CARD 64) = NUMBER OF ENTRIES IN COLUMN 11 OF TALA	
IBLAI =	14	(CARD 65) = NUMBER OF ENTRIES IN COLUMN 13 OF TALA	
IBLAI =	3	(CARD 66) = TIME (IN MINUTES) FOR CONTAINER HANDLER TO LOAD/UNLOAD CONTAINERS FROM TRUCK	
IBLAI =	0	(CARD 67) = INPUT 1 TO USE COMMUNITY FORLIFTS INPUT 0 IF OTHERWISE	
IBLAI =	3	(CARD 72) = INPUT 1 TO USE COMMUNITY FORLIFTS INPUT 0 IF OTHERWISE	
IBLAI =	0	(CARD 74) = 1 IF CONTAINER HANDLER TO MOVE PALLET WITHIN WAREHOUSE AREA (INPUT)	
IBLAI =	700	(CARD 80) = FRACTION OF TIME GROUP 210 FL IS USED INSTEAD OF GROUP 110 FL (AT RECEIVING)	
IBLAI =	300	(CARD 86) = FRACTION OF TIME GROUP 110 FL IS USED INSTEAD OF GROUP 210 FL (AT RECEIVING)	
IBLAI =	0	(CARD 90) = TIME (IN MIN) FOR A 4K/6K FL TO OFFLOAD PALLET FROM TRUCK AND RETURN (AT RECEIVING)	
IBLAI =	4	(CARD 94) = TIME (IN MIN) FOR A 4K/6K FL TO MOVE PALLET FROM RECEIVING TO P AND S AND RETURN	
IBLAI =	4	(CARD 98) = TIME (IN MINUTES) FOR A 4K/6K FL TO LOAD PALLET INTO CONTAINER	
IBLAI =	4	(CARD 100) = TIME (IN MINUTES) FOR A 4K/6K FL TO MOVE PALLET WITHIN RECEIVING AREA	
IBLAI =	0	(CARD 104) = TIME (IN MIN) FOR A 4K/6K FL TO MOVE PALLET WITHIN WAREHOUSE AREA (INPUT)	
IBLAI =	4	(CARD 127) = TIME (IN MIN) FOR A 4K/6K FL TO UNLOAD PALLET FROM TRUCK AT WAREHOUSE	
IBLAI =	6	(CARD 131) = TIME (IN MIN) FOR A 4K/6K FL TO MOVE PALLET WITHIN WAREHOUSE AREA (OUTPUT)	
IBLAI =	4	(CARD 134) = TIME (IN MINUTES) FOR A 4K/6K FL TO OFFLOAD PALLET AT P AND S	
IBLAI =	4	(CARD 138) = TIME (IN MINUTES) FOR A 4K/6K FL TO MOVE PALLET WITHIN P AND S (TO P AND P)	
IBLAI =	1000	(CARD 142) = FRACTION OF TIME GROUP 21 FL IS USED INSTEAD OF GROUP 11 FL (AT RECEIVING)	
IBLAI =	0	(CARD 146) = FRACTION OF TIME GROUP 11 FL IS USED INSTEAD OF GROUP 21 FL (AT RECEIVING)	
IBLAI =	702	(CARD 150) = FRACTION OF TIME GROUP 22 FL IS USED INSTEAD OF GROUP 12 FL (AT RECEIVING)	
IBLAI =	298	(CARD 154) = FRACTION OF TIME GROUP 12 FL IS USED INSTEAD OF GROUP 22 FL (AT RECEIVING)	
IBLAI =	760	(CARD 158) = FRACTION OF TIME GROUP 24 FL IS USED INSTEAD OF GROUP 14 FL (AT P AND S)	
IBLAI =	240	(CARD 162) = FRACTION OF TIME GROUP 14 FL IS USED INSTEAD OF GROUP 24 FL (AT P AND S)	
IBLAI =	0	(CARD 166) = FRACTION OF TIME GROUP 26 FL IS USED INSTEAD OF GROUP 16 FL (AT RECEIVING)	
IBLAI =	303	(CARD 170) = FRACTION OF TIME GROUP 16 FL IS USED INSTEAD OF GROUP 26 FL (AT RECEIVING)	
IBLAI =	500	(CARD 174) = FRACTION OF TIME STRADDLE TRUCK IS USED TO CARRY PALLETS INSTEAD OF TRUCK	
IBLAI =	500	(CARD 178) = FRACTION OF TIME STRADDLE TRUCK IS USED TO CARRY PALLETS INSTEAD OF STRADDLE TRUCK	
IBLAI =	15	(CARD 182) = TIME (IN MINUTES) FOR TRUCK TO TRANSIT FROM STAGING (RECEIVING) TO WAREHOUSE	
IBLAI =	15	(CARD 186) = TIME (IN MINUTES) FOR TRUCK TO TRANSIT FROM MATERIAL RECEIVING TO WAREHOUSE	
IBLAI =	1	(CARD 190) = TIME (IN MINUTES) FOR TRUCK TO TRANSIT FROM ISSUING TO PACKING AND SHIPPING	
IBLAI =	10	(CARD 194) = TIME (IN MINUTES) TO PACK AND PACKAGE ONE HEAVY BULKY ITEM	
IBLAI =	20	(CARD 198) = TIME (IN MINUTES) TO PACKAGE ONE PALLETIZED ITEM	
IBLAI =	7	(CARD 202) = MINIMUM NUMBER OF PALLETS REQUIRED TO USE STRADDLE TRUCK	
IBLAI =	9	(CARD 206) = MINIMUM NUMBER OF PALLETS STRADDLE TRUCK CAN CARRY	
IBLAI =	5	(CARD 210) = MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF TRUCK	
IBLAI =	5	(CARD 214) = MINIMUM NUMBER OF PALLETS TRUCK CAN CARRY	
IBLAI =	5	(CARD 218) = MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF CONTAINER TRUCK	
IBLAI =	4	(CARD 222) = TIME (IN MINUTES) FOR 4K/6K FL TO LOAD/UNLOAD PALLET FROM TRUCK	
IBLAI =	1	(CARD 226) = TIME (IN MINUTES) FOR 4K/6K FL TO POSITION PALLET FOR STRADDLE TRUCK	
IBLAI =	30	(CARD 230) = TIME (IN MINUTES) FOR GROUP 52 CRANE TO LOAD/UNLOAD HEAVY BULKY ITEM FROM TRUCK	
IBLAI =	1000	(CARD 234) = FRACTION OF PALLETS GOING OFF STATION WHICH NEED PACKING AND PACKAGING	
IBLAI =	0	(CARD 238) = FRACTION OF PALLETS GOING OFF STATION WHICH DO NOT NEED PACKING AND PACKAGING	
IBLAI =	1	(CARD 242) = DELAY TIME (IN MINUTES) BETWEEN USE OF GROUP 52 CRANE AND GROUP 72 STRADDLE	
IBLAI =	1	(CARD 246) = DELAY TIME (IN MINUTES) BETWEEN USE OF GROUP 52 CRANE AND GROUP 32 FORKLIFT	

NFA30PCAFELM, NO 20000, UPSS V/6000
 HALFWORD MATRIX TELA

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
14	14	2	3	4	5	6	7	8	9	10
20	14	2	3	4	5	6	7	8	18	3
21	20	2	3	4	5	6	7	8	19	3
22	21	2	3	4	5	6	7	8	20	3
23	22	2	3	4	5	6	7	8	21	3
24	23	2	3	4	5	6	7	8	22	3
25	24	2	3	4	5	6	7	8	23	3
26	25	2	3	4	5	6	7	8	0	0
27	26	2	3	4	5	6	7	8	0	0
28	27	2	3	4	5	6	7	8	0	0
29	28	2	3	4	5	6	7	8	0	0
30	29	2	3	4	5	6	7	8	0	0

HALFWORD MATRIX TELA

ROW/COLUMN	11	12	13	14
1	1	1	1	1
2	2	1	2	1
3	3	1	3	1
4	4	1	4	1
5	5	1	5	1
6	6	1	6	1
7	7	1	7	1
8	8	1	8	1
9	9	1	9	1
10	10	1	10	1
11	11	1	11	1
12	12	1	12	1
13	13	1	13	1
14	14	1	14	1
15	15	1	15	1
16	16	1	16	1
17	17	1	17	1
18	18	1	18	1
19	19	1	19	1
20	20	1	20	1
21	21	1	21	1
22	22	1	22	1
23	23	1	23	1
24	24	1	24	1
25	25	1	25	1
26	26	1	26	1
27	27	1	27	1
28	28	1	28	1
29	29	1	29	1
30	30	1	30	1

TABLE 1. INPUT ELEMENTS OF USER DEFINED INPUT VALUES
(CONTAINED ELEMENTS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

ELEMENT (1.1)	(CARD 329) • INPUT 0 IF CANCO NOT CONTAINING INPUT 1 IF CANCO IS CONTAINING
ELEMENT (1.2)	(CARD 331) • INPUT 0 IF LIGHT BULKY/BOXES ARE PALLETIZED; INPUT 1 IF NOT PALLETIZED
ELEMENT (1.3)	(CARD 333) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.4)	(CARD 335) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.5)	(CARD 337) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.6)	(CARD 340) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.7)	(CARD 343) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.8)	(CARD 344) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.9)	(CARD 347) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.10)	(CARD 350) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.11)	(CARD 353) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.12)	(CARD 356) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.13)	(CARD 359) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.14)	(CARD 362) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.15)	(CARD 365) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.16)	(CARD 368) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.17)	(CARD 371) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.18)	(CARD 374) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.19)	(CARD 377) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.20)	(CARD 380) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.21)	(CARD 383) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.22)	(CARD 386) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.23)	(CARD 389) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.24)	(CARD 392) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.25)	(CARD 395) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.26)	(CARD 398) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.27)	(CARD 401) • NUMBER OF PALLETS FOR TRANSHIPMENT
ELEMENT (1.28)	(CARD 404) • NUMBER OF PALLETS FOR TRANSHIPMENT

WALSHCO MATTER TBL

ROW/COL	1	2	3	4	5	6
1	0	0	0	3	11	3
2	1	0	0	0	0	0
3	0	0	0	0	0	0
4	32	4	0	12	0	0
5	1	1	0	0	0	0
6	2	2	2	0	0	0
7	1	1	1	0	0	0

MATRIX AREA IS THE THROUGHPUT MATRIX (FOR GENERAL EXPLANATION, SEE CARD NUMBER 564)
(IF DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

INPUTS TO RECEIVING:

COLUMN 1 = NUMBER OF PALLETS INTO RECEIVING (CARD 594)

OUTPUTS FROM RECEIVING:

COLUMN 2 = NUMBER OF PALLETS FROM RECEIVING TO PACKING AND SHIPPING (TRANSHIPMENT) (CARD 592)

COLUMN 3 = NUMBER OF PALLETS FROM RECEIVING TO DTG (CARD 600)

COLUMN 4 = NUMBER OF PALLETS FROM RECEIVING TO WAREHOUSE (CARD 604)

INPUTS TO STORAGE:

COLUMN 5 = NUMBER OF PALLETS FROM RECEIVING APPLICABLE AT WAREHOUSE (CARD 611)

COLUMN 6 = NUMBER OF ELONGATED HEAVY BULKY GOING INTO WAREHOUSE (CARD 612)

COLUMN 7 = NUMBER OF NON-ELONGATED HEAVY BULKY GOING INTO WAREHOUSE (CARD 610)

COLUMN 8 = NUMBER OF HEAVY BULKY STOPPED OUTSIDE WAREHOUSE (CARD 621)

COLUMN 9 = NUMBER OF PALLETS FROM RECEIVING INTO WAREHOUSE (CARD 674)

OUTPUTS FROM STORAGE:

COLUMN 10 = NUMBER OF PALLETS INTO WAREHOUSE BINS (CARD 614)

COLUMN 11 = NUMBER OF ELONGATED HEAVY BULKY INTO WAREHOUSE BINS (CARD 623)

COLUMN 12 = NUMBER OF NON-ELONGATED HEAVY BULKY INTO WAREHOUSE BINS (CARD 626)

COLUMN 13 = NUMBER OF HEAVY BULKY STOPPED OUTSIDE WAREHOUSE (CARD 629)

INPUTS TO ISSUING:

COLUMN 14 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED (CARD 631)

COLUMN 15 = NUMBER OF HEAVY BULKY FROM WAREHOUSE TO BE ISSUED FOR OFF-STATION (CARD 642)

COLUMN 16 = NUMBER OF HEAVY BULKY FROM WAREHOUSE TO BE ISSUED FOR ON-STATION (CARD 663)

OUTPUTS FROM ISSUING:

COLUMN 17 = NUMBER OF PALLETS ISSUED FROM WAREHOUSE TO PACKING AND SHIPPING VIA TRUCK (CARD 634)

COLUMN 18 = NUMBER OF PALLETS ISSUED FROM WAREHOUSE TO PACKING AND SHIPPING VIA STRADDLE TRUCK (CARD 636)

COLUMN 19 = NUMBER OF HEAVY BULKY ISSUED FROM WAREHOUSE TO OFF-STATION USER (CARD 645)

COLUMN 20 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED FOR ON-STATION VIA STRADDLE TRUCK (CARD 657)

COLUMN 21 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED FOR ON-STATION VIA TRUCK (CARD 660)

COLUMN 22 = NUMBER OF ELONGATED HEAVY BULKY ISSUED FROM WAREHOUSE TO ON-STATION USERS (CARD 666)

COLUMN 23 = NUMBER OF NON-ELONGATED HEAVY BULKY ISSUED FROM WAREHOUSE TO ON-STATION USERS (CARD 669)

COLUMN 24 = NUMBER OF HEAVY BULKY ISSUED FROM OUTSIDE WAREHOUSE TO ON-STATION USERS (CARD 672)

INPUTS TO PACKING AND SHIPPING:

COLUMN 25 = NUMBER OF PALLETS FROM RECEIVING INTO PACKING AND SHIPPING (TRANSHIPMENT) (CARD 602)

COLUMN 26 = NUMBER OF PALLETS FROM TENANTS TO PACKING AND SHIPPING (CARD 648)

COLUMN 27 = NUMBER OF PALLETS FROM WAREHOUSE INTO PACKING AND SHIPPING VIA STRADDLE TRUCK (CARD 677)

COLUMN 28 = NUMBER OF PALLETS INTO PACKING AND SHIPPING FROM WAREHOUSE (CARD 680)

OUTPUTS FROM PACKING AND SHIPPING:

COLUMN 29 = NUMBER OF NON-CONTAINERIZED PALLETS FROM PACKING AND SHIPPING TO OFF-STATION (CARD 651)

COLUMN 30 = NUMBER OF CONTAINERIZED PALLETS FROM PACKING AND SHIPPING TO OFF-STATION (CARD 654)

WAREHOUSE MATRIX (444)

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	346	54	127	317	317	12	12	54	371	
2	792	101	276	736	736	24	24	108	824	

UINSROGELTMO PD 20004 GFSS W/0003
HALFBOG MATRIX AAA1

CRM GPSS W/0000 VER. 1.3 PSM 526 05/04/87 14.45.55. PAGE 70

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0

HALFBOG MATRIX AAA1

ROW/COLUMN	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0

HALFBOG MATRIX AAA1

ROW/COLUMN	21	22	23	24	25	26	27	28	29	30
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0

DETAILED EQUIPMENT DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING

CHEN = CONTAINER HANDLER (GRP 60) (CARD 17)
 FLAP = 4K FL (GRP 210) COMMUNITY USED AT RECEIVING, P AND S, STORAGE, AND ISSUING (ALL ADJACENT) (CARD 12)
 FLAP = 4K FL (GRP 110) COMMUNITY USED AT RECEIVING, P AND S, STORAGE, AND ISSUING (ALL ADJACENT) (CARD 22)
 FLAP = 4K FL (GRP 20) COMMUNITY USED AT RECEIVING AND SHIPPING (ADJACENT) (CARD 28)
 FLAP = 4K FL (GRP 10) COMMUNITY USED AT RECEIVING AND SHIPPING (ADJACENT) (CARD 29)
 FLA = 4K FL (GRP 21) USED AT RECEIVING (CARD 32)
 FLA = 4K FL (GRP 11) USED AT RECEIVING (CARD 34)
 FLB = 4K FL (GRP 22) USED AT WAREHOUSE (CARD 36)
 FLB = 4K FL (GRP 12) USED AT WAREHOUSE (CARD 38)
 FLB = 4K FL (GRP 24) USED AT PACKING AND SHIPPING (CARD 40)
 FLB = 4K FL (GRP 14) USED AT PACKING AND SHIPPING (CARD 42)
 FLB = 10K FL (GRP 32) USED AT WAREHOUSE (CARD 44)
 CRB = 10K CRANE (GRP 92) USED AT WAREHOUSE (CARD 46)
 SLB = SIDE LOADER (GRP 72) USED AT WAREHOUSE (CARD 48)
 STK = STACKER TRUCK

ME EQUIPMENT UTILIZATION (NAVAL SUPPLY CENTER, CHARLESTON)

EQUIPMENT	NUMBER AVAILABLE	CAPACITY	AVERAGE NUMBER USED	UTILIZATION	TOTAL NUMBER OF TIMES USED	AVERAGE TIME USED (MINUTES)	NUMBER CURRENTLY IN USE	MAXIMUM NUMBER USED
STORAGE			AVERAGE CONTENTS	AVERAGE UTILIZATION	INPIES	AVERAGE TIME/TRAN	CURRENT CONTENTS	MAXIMUM CONTENTS
FLBA	16		5.235	0.577	513	4.555	2	16
FLBB	33		12.190	0.369	692	9.455	0	33
FLAP	14		4.975	0.355	262	7.460	0	14
FLBD	19		5.825	0.310	474	5.960	0	19
FLAT	6		1.975	0.329	165	5.745	1	6
FLCA	2		6.050	0.025	4	6.000	0	2
CFSE	1		6.750	0.750	13	27.692	1	1
SLBB	2		0.117	0.050	14	4.000	0	2
STKR	13		5.440	0.410	52	26.380	5	13

TOTAL NUMBER OF PIECES OF EQUIPMENT = 105
 OVERALL UTILIZATION = 36 PERCENT

QINSRDC, HTM, MD, 20064, GPSS V/6000
HALFWORD MATRIX TPLA

ROW/COLUMN	1	2	3	4	5	6	7	8	PAGE	75
19	1c	2	3	4	5	6	7	8	9	10
20	14	2	3	4	5	6	7	8	9	10
21	20	2	3	4	5	6	7	8	9	10
22	21	2	3	4	5	6	7	8	9	10
23	22	2	3	4	5	6	7	8	9	10
24	23	2	3	4	5	6	7	8	9	10
25	24	2	3	4	5	6	7	8	9	10
26	25	2	3	4	5	6	7	8	9	10
27	26	2	3	4	5	6	7	8	9	10
28	27	2	3	4	5	6	7	8	9	10
29	28	2	3	4	5	6	7	8	9	10
30	29	2	3	4	5	6	7	8	9	10

HALFWORD MATRIX TPLA

ROW/COLUMN	11	12	13	14
1	1	1	1	1
2	2	1	2	1
3	3	1	3	1
4	4	1	4	1
5	5	1	5	1
6	6	1	6	1
7	7	1	7	1
8	8	1	8	1
9	9	1	9	1
10	10	1	10	1
11	11	1	11	1
12	12	1	12	1
13	13	1	13	1
14	14	1	14	1
15	15	1	15	1
16	16	1	16	1
17	17	1	17	1
18	18	1	18	1
19	19	1	19	1
20	20	1	20	1
21	21	1	21	1
22	22	1	22	1
23	23	1	23	1
24	24	1	24	1
25	25	1	25	1
26	26	1	26	1
27	27	1	27	1
28	28	1	28	1
29	29	1	29	1
30	30	1	30	1

MATRIX FORM CONSISTS OF USER DEFINED INPUT VALUES
(TOTAL OF DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

ELEMENT (1.1) (CARD 324) = INPUT 0 IF CARGO NOT CONTAINERIZED; INPUT 1 IF CARGO IS CONTAINERIZED
 ELEMENT (1.2) (CARD 331) = INPUT 0 IF LIGHT BULKY/PALETS ARE PALLETIZED; INPUT 1 IF NOT PALLETIZED
 ELEMENT (1.3) (CARD 333) = NUMBER OF PALLETS FOR OTN
 ELEMENT (1.4) (CARD 335) = NUMBER OF PALLETS FOR TRANSHIPMENT
 ELEMENT (1.5) (CARD 337) = NUMBER OF PALLETS FOR WAREHOUSE VIA NON-AUTOMATED MHE
 ELEMENT (1.6) (CARD 340) = NUMBER OF PALLETS FOR WAREHOUSE VIA AUTOMATED MHE
 ELEMENT (2.1) (CARD 343) = NUMBER OF FOOD/HAZAROUS PALLETS
 ELEMENT (3.1) (CARD 344) = NUMBER OF LONGGATED HEAVY BULKY TO STOCK IN WAREHOUSE
 ELEMENT (3.2) (CARD 347) = NUMBER OF NON-ELONGATED HEAVY BULKY TO STOCK IN WAREHOUSE
 ELEMENT (3.3) (CARD 350) = NUMBER OF HEAVY BULKY TO STORE OUTSIDE WAREHOUSE
 ELEMENT (4.1) (CARD 353) = NUMBER OF PALLETS ISSUED FROM WAREHOUSE GOING TO OFF-STATION USERS (VIA NON-AUTOMATED SYSTEM)
 ELEMENT (4.2) (CARD 358) = NUMBER OF PALLETS ISSUED FROM WAREHOUSE GOING TO ON-STATION USERS (VIA NON-AUTOMATED SYSTEM)
 ELEMENT (4.3) (CARD 363) = NUMBER OF PALLETS ISSUED FROM WAREHOUSE GOING TO OFF-STATION USERS (VIA AUTOMATED SYSTEM)
 ELEMENT (4.4) (CARD 366) = NUMBER OF PALLETS ISSUED FROM WAREHOUSE GOING TO ON-STATION USERS (VIA AUTOMATED SYSTEM)
 ELEMENT (5.1) (CARD 373) = NUMBER OF PALLETS ARRIVING AT PACKING AND SHIPPING FROM TENANTS
 ELEMENT (5.2) (CARD 378) = INPUT 0 IF (5.1) IS PALLETIZED; INPUT 1 IF NOT PALLETIZED
 ELEMENT (6.1) (CARD 384) = NUMBER OF ELONGATED HEAVY BULKY ITEMS ISSUED FROM WAREHOUSE GOING TO OFF-STATION USERS
 ELEMENT (6.2) (CARD 388) = NUMBER OF NON-ELONGATED HEAVY BULKY ITEMS ISSUED FROM WAREHOUSE GOING TO OFF-STATION USERS
 ELEMENT (6.3) (CARD 392) = NUMBER OF HEAVY BULKY ITEMS STORED OUTSIDE WAREHOUSE GOING TO OFF-STATION USERS
 ELEMENT (7.1) (CARD 396) = NUMBER OF ELONGATED HEAVY BULKY ITEMS ISSUED FROM WAREHOUSE GOING TO ON-STATION USERS
 ELEMENT (7.2) (CARD 400) = NUMBER OF NON-ELONGATED HEAVY BULKY ITEMS ISSUED FROM WAREHOUSE GOING TO ON-STATION USERS
 ELEMENT (7.3) (CARD 404) = NUMBER OF HEAVY BULKY ITEMS STORED OUTSIDE WAREHOUSE GOING TO ON-STATION USERS

HALEWROD MATRIX TELF

ROW/COLUMN	1	2	3	4	5	6
1	0	0	0	3	11	3
2	18	0	0	0	0	0
3	0	0	0	0	0	0
4	32	4	0	12	0	0
5	1	1	0	0	0	0
6	2	2	2	0	0	0
7	1	1	1	0	0	0

MATRIX AAA1 IS THE THROUGHPUT MATRIX (FOR GENERAL EXPLANATION SEE CARD NUMBER 564)
 (1) TABLE CONDITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING

INPUTS TO REC IVING

COLUMN 1 = NUMBER OF PALLETS INTO RECEIVING (CARD 594)

OUTPUTS FROM REC IVING

COLUMN 2 = NUMBER OF PALLETS FROM RECEIVING TO PACKING AND SHIPPING (TRANSHIPMENT) (CARD 596)

COLUMN 3 = NUMBER OF PALLETS FROM RECEIVING TO PTO (CARD 600)

COLUMN 4 = NUMBER OF PALLETS FROM RECEIVING TO WAREHOUSE (CARD 601)

INPUTS TO STORAGE

COLUMN 5 = NUMBER OF PALLETS FROM RECEIVING ARRIVING AT WAREHOUSE (CARD 611)

COLUMN 6 = NUMBER OF ELONGATED HEAVY BULKY GOING INTO WAREHOUSE (CARD 617)

COLUMN 7 = NUMBER OF NON-ELONGATED HEAVY BULKY GOING INTO WAREHOUSE (CARD 619)

COLUMN 8 = NUMBER OF HEAVY BULKY STORED OUTSIDE WAREHOUSE (CARD 621)

COLUMN 9 = NUMBER OF PALLETS FROM RECEIVING INTO WAREHOUSE (CARD 624)

OUTPUTS FROM STORAGE

COLUMN 10 = NUMBER OF PALLETS INTO WAREHOUSE BINS (CARD 614)

COLUMN 11 = NUMBER OF ELONGATED HEAVY BULKY INTO WAREHOUSE BINS (CARD 623)

COLUMN 12 = NUMBER OF NON-ELONGATED HEAVY BULKY INTO WAREHOUSE BINS (CARD 626)

COLUMN 13 = NUMBER OF HEAVY BULKY STORED OUTSIDE WAREHOUSE (CARD 629)

INPUTS TO ISSUING

COLUMN 14 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED (CARD 631)

COLUMN 15 = NUMBER OF HEAVY BULKY FROM WAREHOUSE TO BE ISSUED FOR OFF-STATION (CARD 642)

COLUMN 16 = NUMBER OF HEAVY BULKY FROM WAREHOUSE TO BE ISSUED FOR ON-STATION (CARD 663)

OUTPUTS FROM ISSUING

COLUMN 17 = NUMBER OF PALLETS ISSUED FROM WAREHOUSE TO PACKING AND SHIPPING VIA TRUCK (CARD 634)

COLUMN 18 = NUMBER OF PALLETS ISSUED FROM WAREHOUSE TO PACKING AND SHIPPING VIA STRADDLE TRUCK (CARD 638)

COLUMN 19 = NUMBER OF HEAVY BULKY ISSUED FROM WAREHOUSE TO OFF-STATION USER (CARD 649)

COLUMN 20 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED FOR ON-STATION VIA STRADDLE TRUCK (CARD 657)

COLUMN 21 = NUMBER OF PALLETS FROM WAREHOUSE TO BE ISSUED FOR ON-STATION VIA TRUCK (CARD 660)

COLUMN 22 = NUMBER OF ELONGATED HEAVY BULKY ISSUED FROM WAREHOUSE TO ON-STATION USERS (CARD 666)

COLUMN 23 = NUMBER OF NON-ELONGATED HEAVY BULKY ISSUED FROM WAREHOUSE TO ON-STATION USERS (CARD 669)

COLUMN 24 = NUMBER OF HEAVY BULKY ISSUED FROM OUTSIDE WAREHOUSE TO ON-STATION USERS (CARD 672)

INPUTS TO PACKING AND SHIPPING

COLUMN 25 = NUMBER OF PALLETS FROM RECEIVING INTO PACKING AND SHIPPING (TRANSHIPMENT) (CARD 602)

COLUMN 26 = NUMBER OF PALLETS FROM TRAMWAYS TO PACKING AND SHIPPING (CARD 646)

COLUMN 27 = NUMBER OF PALLETS FROM WAREHOUSE INTO PACKING AND SHIPPING VIA STRADDLE TRUCK (CARD 677)

COLUMN 28 = NUMBER OF PALLETS INTO PACKING AND SHIPPING FROM WAREHOUSE (CARD 600)

OUTPUTS FROM PACKING AND SHIPPING

COLUMN 29 = NUMBER OF NON-CONTAINERIZED PALLETS FROM PACKING AND SHIPPING TO OFF-STATION (CARD 651)

COLUMN 30 = NUMBER OF CONTAINERIZED PALLETS FROM PACKING AND SHIPPING TO OFF-STATION (CARD 654)

HALF-DEU MATRIX AAA1

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	366	54	127	317	317	12	12	12	54	371
2	792	108	276	716	716	24	24	24	108	824

HALFWORD MATRIX AAA1

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	1104	162	420	1104	1104	36	36	36	162	1271
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0

HALFWORD MATRIX AAA1

ROW/COLUMN	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	15	92	107	3	238
2	0	0	0	0	0	30	145	215	8	434
3	0	0	0	0	0	45	254	341	11	634
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0

HALFWORD MATRIX AAA1

ROW/COLUMN	21	22	23	24	25	26	27	28	29	30
1	0	0	0	0	0	24	107	92	228	0
2	0	0	0	0	0	48	215	185	507	0
3	0	0	0	0	0	72	341	254	802	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0

APPENDIX C
SHIP OVERHAUL MODEL SAMPLE RUN

DETAILED EQUIPMENT DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING

FLBA = 4K FL (GRP 21W) LOCATED AT INERT (WEAPONS MATERIAL RECEIVING) DEDICATED TO INERT (CARD 12)
 FLAA = 6K FL (GRP 11W) LOCATED AT INERT DEDICATED TO INERT (CARD 14)
 FLBC = 4K FL (GRP 23W) LOCATED AT WEAPONS ASSEMBLY AREA DEDICATED TO WEAPONS ASSEMBLY AREA (CARD 16)
 FLAC = 6K FL (GRP 13W) LOCATED AT WEAPONS ASSEMBLY AREA DEDICATED TO WEAPONS ASSEMBLY AREA (CARD 18)
 FLBAY = 4K FL (GRP 21W) LOCATED AT INERT USED AT WEAPONS ASSEMBLY AREA (CARD 20)
 FLBAA = 4K FL (GRP 21W) LOCATED AT INERT USED AT WEAPONS ASSEMBLY AREA OR LIVE EXPLOSIVE AREA (CARD 22)
 CHFA = CONTAINER HANDLER (GRP 01W) USED AT WEAPONS MATERIAL RECEIVING (CARD 28)
 CRDA = 4/6K CRANES (GRP 41W) USED AT WEAPONS MATERIAL RECEIVING (CARD 30)
 CREB = 10K CRANES (GRP 51W) USED AT WEAPONS MATERIAL RECEIVING (CARD 32)
 SLHA = 4K SIDELOADERS (GRP 81W) USED AT WEAPONS MATERIAL RECEIVING (CARD 34)
 SLGA = 30K SIDELOADERS USED AT WEAPONS MATERIAL RECEIVING (CARD 36)
 CHFB = CONTAINER HANDLER (GRP 02W) USED AT HOT CARGO AREA (CARD 38)
 CRDB = 4/6K CRANES (GRP 42W) USED AT HOT CARGO AREA (CARD 40)
 SLHB = 4K SIDELOADERS (GRP 82W) USED AT HOT CARGO AREA (CARD 42)
 STRK = STRADDLE TRUCKS (CARD 42)
 SLHC = 4K SIDELOADERS (GRP 83W) USED AT BOMB BUILDUP AREA (CARD 43)
 CRDC = 4/6K CRANES (GRP 43W) USED AT BOMB BUILDUP AREA (CARD 45)

PHE EQUIPMENT UTILIZATION (NAVAL AIR STATION, JACKSONVILLE)

EQUIPMENT	NUMBER AVAILABLE	CAPACITY	AVERAGE NUMBER USED	UTILIZATION	TOTAL NUMBER OF TIMES USED	AVERAGE TIME USED (MINUTES)	NUMBER CURRENTLY IN USE	MAXIMUM NUMBER USED
STORAGE			AVERAGE CONTENTS	AVERAGE UTILIZATION	ENTRIES	AVERAGE TIME/TRAN	CURRENT CONTENTS	MAXIMUM CONTENTS
ILBA	1		0.440	0.440	22	9.591	0	1
FLAC	1		0.294	0.294	14	10.071	0	1
FLBAY	1		0.185	0.185	8	11.125	0	1
FLBAA	3		0.552	0.184	18	14.722	0	3
FLAAX	3		1.881	0.627	54	16.722	1	3

TOTAL NUMBER OF PIECES OF EQUIPMENT = 10
 OVERALL UTILIZATION = 33 PERCENT

SINGLE VALUED INPUT PARAMETERS AS DEFINED BY USER FOR THIS RUN
(DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

16LA1	6	(CARD 57) - NUMBER OF ENTRIES IN COLUMN 1 OF TBLA
16LA3	6	(CARD 56) - NUMBER OF ENTRIES IN COLUMN 3 OF TBLA
16LA5	6	(CARD 53) - NUMBER OF ENTRIES IN COLUMN 5 OF TBLA
16LA7	6	(CARD 60) - NUMBER OF ENTRIES IN COLUMN 7 OF TBLA
16LA9	6	(CARD 61) - NUMBER OF ENTRIES IN COLUMN 9 OF TBLA
16L11	6	(CARD 62) - NUMBER OF ENTRIES IN COLUMN 11 OF TBLA
16L13	6	(CARD 63) - NUMBER OF ENTRIES IN COLUMN 13 OF TBLA
16L15	6	(CARD 64) - TIME FOR A CONTAINER HANDLER TO OFFLOAD A CONTAINER FROM A TRUCK
16L17	0	(CARD 67) - TIME TO LOAD MATERIAL IN TRUCK ONTO SKIDS
16L19	600	(CARD 69) - FRACTION OF TIME GROUP 21W FORKLIFT IS USED INSTEAD OF GROUP 11W FORKLIFT (AT INERT)
16L21	400	(CARD 73) - FRACTION OF TIME GROUP 11W FORKLIFT IS USED INSTEAD OF GROUP 21W FORKLIFT (AT INERT)
16L23	4	(CARD 77) - TIME FOR A 476K FORKLIFT TO LOAD/OFFLOAD PALLET ONTO/FROM TRUCK
16L25	6	(CARD 80) - TIME FOR A 476K CRANE TO LOAD/UNLOAD A NON-FORKLIFTABLE LOAD ONTO/FROM TRUCK
16L27	0	(CARD 83) - TIME FOR A 10K CRANE TO LOAD/UNLOAD A NON-FORKLIFTABLE LOAD ONTO/FROM TRUCK
16L29	1	(CARD 86) - 0 IF NON-FORKLIFTABLE LOADS AT INERT TO BE STORED OUTSIDE WAREHOUSE -1 IF INSIDE
16L31	0	(CARD 92) - TIME FOR SOLDER TO MOVE NON-FLTLB LOAD FROM OUTSIDE TO INSIDE WRMSE AT WEP MAT REC
16L33	1	(CARD 97) - 0 IF PALLETS AT INERT ARE TO BE STORED OUTSIDE WRMSE; -1 IF INSIDE WRMSE
16L35	4	(CARD 103) - TIME FOR A 476K FL TO MOVE A PALLET FROM OUTSIDE TO INSIDE WAREHOUSE AT INERT
16L37	4	(CARD 108) - TIME FOR A 476K FL TO MOVE PALLET FROM INERT WAREHOUSE TO TEMP STAGING (P AND S)
16L39	5	(CARD 112) - TIME TO PACK AND PACKAGE A PALLET
16L41	500	(CARD 114) - FRACTION OF TIME GROUP 210K FL IS CHOSEN INSTEAD OF GROUP 110W FL
16L43	500	(CARD 118) - FRACTION OF TIME GROUP 110W FL IS CHOSEN INSTEAD OF GROUP 211W FL
16L45	0	(CARD 122) - TIME FOR SLDR TO MOVE NON-FORKLIFTABLE LOAD FROM M.C.A. TO INSIDE WRMSE AND RTN
16L47	6	(CARD 127) - TIME FOR TRUCK AND FORKLIFT TO TRANSIT FROM M.C.A./OFFICE TO MAGAZINE AREA
16L49	12	(CARD 130) - TIME FOR A 476K FL TO UNLD PALLET FROM TRUCK, STORE IN MAG AND RETURN TO TRUCK
16L51	1	(CARD 134) - 1 IF FORKLIFT USED TO SUPPORT PACKING AND PACKAGING PROCESS; -0 IF OTHERWISE
16L53	30	(CARD 141) - TIME TO ASSEMBLE ONE GROUPING OF WEAPONS AT BOMB BUILDUP AREA
16L55	200	(CARD 143) - FRACTION OF WEAPONS TO BE DELIVERED FROM BOMB BUILDUP AREA TO ON-STATION USERS
16L57	800	(CARD 147) - FRACTION OF WEAPONS DELIVERED FROM BOMB BUILDUP AREA TO OFF-STATION USERS
16L59	4	(CARD 151) - TIME FOR A 476K FL TO MOVE PALLET FROM STORAGE TO TEMP STAGING (INERT WAREHOUSE)
16L61	6	(CARD 155) - TIME FOR TRUCK TO TRANSIT FROM TEMP STAGING (INERT WAREHOUSE) TO P AND S (M.A.A.)
16L63	0	(CARD 159) - FRACTION OF TIME GROUP 23W FORKLIFT IS CHOSEN INSTEAD OF GROUP 13W FORKLIFT
16L65	1000	(CARD 163) - FRACTION OF TIME GROUP 13W FORKLIFT IS CHOSEN INSTEAD OF GROUP 23W FORKLIFT
16L67	12	(CARD 167) - TIME TO MOVE A 476K FORKLIFT FROM HOT CARGO AREA/OFFICE TO MAGAZINE
16L69	4	(CARD 170) - TIME FOR A 476K FL TO MOVE PALLET FROM STORAGE (AT MAG) TO TEMP STAGING (AT MAG)
16L71	6	(CARD 174) - TIME FOR A 476K FL AND TRUCK TO GO FROM TEMP STAGING (MAG) TO P AND S (M.A.A.)
16L73	12	(CARD 178) - TIME FOR A 476K FORKLIFT TO BE TRUCKED FROM P AND S (M.A.A.) TO HOT CARGO AREA
16L75	4	(CARD 182) - TIME FOR A 476K FL TO MOVE PALLET FROM STORAGE TO TEMP STAGING (INRT WEP WAREHOUSE)
16L77	16	(CARD 186) - TIME FOR TRUCK TO GO FROM TEMP STAGING (INRT WEP WAREHOUSE) TO BOMB BUILDUP AREA
16L79	1	(CARD 189) - MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF STRADDLE TRUCK
16L81	3	(CARD 191) - MINIMUM NUMBER OF PALLETS THAT STRADDLE TRUCK CAN CARRY
16L83	1	(CARD 193) - MINIMUM NUMBER OF PALLETS REQUIRED FOR USE OF FLATBED TRUCK
16L85	13	(CARD 197) - MAXIMUM NUMBER OF PALLETS THAT FLATBED TRUCK CAN CARRY
16L87	1	(CARD 197) - TIME FOR A 476K FORKLIFT TO POSITION ONE PALLET FOR STRADDLE TRUCK
16L89	2	(CARD 199) - TIME FOR A 4K SIDELOADER TO GO BETWEEN INERT WEP WAREHOUSE AND BOMB BUILDUP AREA
16L91	2	(CARD 202) - TIME FOR A 30K SIDELOADER TO GO BETWEEN INERT WEP WAREHOUSE AND BOMB BUILDUP AREA
16L93	6	(CARD 205) - TIME FOR A 476K FORKLIFT TO MOVE PALLET FROM MAGAZINE AND LOAD IT ONTO TRUCK
16L95	6	(CARD 208) - TIME FOR TRUCK AND FORKLIFT TO GO FROM MAGAZINE TO BOMB BUILDUP AREA
16L97	12	(CARD 211) - TIME FOR TRUCK AND FORKLIFT TO GO FROM BOMB BUILDUP AREA TO HOT CARGO AREA
16L99	2	(CARD 214) - TIME FOR 4K SIDELOADER TO MOVE LOAD FROM MAG TO BOMB BUILDUP AREA AND RETURN
16L101	2	(CARD 217) - TIME FOR STRADDLE TRUCK TO GO FROM INERT WEAPONS WAREHOUSE TO BOMB BUILDUP AREA

ISTTB = 2 (CARD 220) = TIME FOR STAPLER TRUCK TO GO FROM B.8.A. TO ON-STATION USER AND RETURN
 INSLC = 2 (CARD 221) = TIME FOR A 4K SIDELOADER TO GO FROM B.8.A. TO ON-STATION USER AND RETURN
 INTRM = 30 (CARD 222) = TIME FOR TRUCK TO GO FROM BOMB BUILDUP AREA TO ON-STATION USER
 INPFI = 4 (CARD 223) = TIME FOR A 476K FORKLIFT TO MOVE PALLET FROM B.8.A. TO PACKING AND SHIPPING
 INSLD = 2 (CARD 224) = TIME FOR A 4K SIDELOADER TO MOVE CONSOLIDATED WEAPON FROM B.8.A. TO P AND S
 INPFI = 35 (CARD 225) = TIME TO PACK AND PACKAGE A NON-FORKLIFTABLE CONSOLIDATED WEAPON
 INPFI = 6 (CARD 226) = TIME FOR A 476K FORKLIFT TO GO FROM INERT RECEIVING AREA TO HOT CARGO AREA
 INPFI = 6 (CARD 227) = TIME FOR TRUCK AND 476K FL TO GO BETWEEN INERT RECEIVING AREA AND MAGAZINE AREA
 INPFI = 6 (CARD 228) = TIME FOR TRUCK AND 476K FORKLIFT TO GO BETWEEN B.8.A. AND INERT RECEIVING AREA

MATRIX TABLE CONSISTS OF USER DEFINED INPUT VALUES
 (DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

COLUMN 1 (CARD 280) = HOURS TRUCKS ARRIVE AT WEAPONS MATERIAL RECEIVING CARRYING INERT INCOMING MATERIAL
 COLUMN 2 (CARD 281) = NUMBER OF TRUCKS ARRIVING AT HOURS SPECIFIED IN COLUMN 1
 COLUMN 3 (CARD 282) = HOURS VEHICLES ARRIVE AT HOT CARGO AREA/OFFICE CARRYING LIVE EXPLOSIVES
 COLUMN 4 (CARD 283) = NUMBER OF VEHICLES ARRIVING AT HOURS SPECIFIED IN COLUMN 3
 COLUMN 5 (CARD 284) = HOURS ISSUE DOCUMENTS ARRIVE AT INERT WAREHOUSE FOR INERT BULK TO OFF-STATION (ADJACENT TO P AND S)
 COLUMN 6 (CARD 285) = NUMBER OF ISSUE DOCUMENTS ARRIVING AT HOURS SPECIFIED IN COLUMN 5
 COLUMN 7 (CARD 301) = HOURS ISSUE DOCUMENTS ARRIVE AT INERT WAREHOUSE FOR INERT BULK TO OFF-STATION (NOT ADJACENT TO P AND S)
 COLUMN 8 (CARD 302) = NUMBER OF ISSUE DOCUMENTS ARRIVING AT HOURS SPECIFIED IN COLUMN 7
 COLUMN 9 (CARD 303) = HOURS ISSUE DOCUMENTS ARRIVE AT HOT CARGO AREA/OFFICE FOR LIVE EXPLOSIVE BULK TO OFF-STATION
 COLUMN 10 (CARD 310) = NUMBER OF ISSUE DOCUMENTS ARRIVING AT HOURS SPECIFIED IN COLUMN 9
 COLUMN 11 (CARD 312) = HOURS ISSUE DOCUMENTS ARRIVE AT INERT WEAPONS WAREHOUSE FOR MATERIAL TO BOMB BUILDUP AREA
 COLUMN 12 (CARD 317) = NUMBER OF ISSUE DOCUMENTS ARRIVING AT HOURS SPECIFIED IN COLUMN 11
 COLUMN 13 (CARD 319) = HOURS ISSUE DOCUMENTS ARRIVE AT HOT CARGO AREA/OFFICE FOR MATERIAL FROM MAGAZINES TO BOMB BUILDUP AREA
 COLUMN 14 (CARD 323) = NUMBER OF ISSUE DOCUMENTS ARRIVING AT HOURS SPECIFIED IN COLUMN 13

HALFBOFO MATRIX TABLE

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	0	3	6	2	0	2	0	0	0	1
2	5	3	7	2	2	1	0	0	2	1
3	6	3	6	2	6	2	0	0	8	1
4	13	3	15	2	10	1	0	0	10	1
5	16	3	16	2	16	2	0	0	16	1
6	21	2	23	2	18	1	0	0	18	1
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0

HALFWORD MATRIX TELA

ROW/COLUMN	11	12	13	14
1	0	1	0	1
2	2	1	2	1
3	6	1	4	1
4	10	1	10	1
5	14	1	14	1
6	18	1	18	1
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0

MATRIX TBLM CONSISTS OF USER DEFINED INPUT VALUES
(DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

MWPN(1,1) (CARD 321) = 1 IF CARGO IS CONTAINERIZED = 0 IF NOT CONTAINERIZED (INERT INTO WEAPONS MATERIAL RECEIVING)
 MWPN(1,2) (CARD 330) = NUMBER OF PALLETS OR PALLET EQUIVALENTS ON TRUCK (INERT INTO MATERIAL WEAPONS RECEIVING)
 MWPN(1,3) (CARD 331) = 1 IF LOADS ARE ON SKIDS = 0 IF NOT ON SKIDS (INERT INTO WEAPONS MATERIAL RECEIVING)
 MWPN(1,4) (CARD 333) = NUMBER OF NON-FORKLIFTABLE LOADS LESS THAN OR EQUAL TO 4K ON TRUCK (INERT INTO WEAPONS MATERIAL RECEIVING)
 MWPN(1,5) (CARD 335) = NUMBER OF NON-FORKLIFTABLE LOADS GREATER THAN 4K ON TRUCK (INERT INTO WEAPONS MATERIAL RECEIVING)
 MWPN(2,1) (CARD 334) = 1 IF CARGO IS CONTAINERIZED = 0 IF NOT CONTAINERIZED (LIVE INTO HOT CARGO AREA)
 MWPN(2,2) (CARD 341) = NUMBER OF PALLETS OR PALLET EQUIVALENTS ON VEHICLE (LIVE INTO HOT CARGO AREA)
 MWPN(2,3) (CARD 342) = 1 IF LOADS ARE ON SKIDS = 0 IF NOT ON SKIDS (LIVE INTO HOT CARGO AREA)
 MWPN(2,4) (CARD 344) = NUMBER OF NON-FORKLIFTABLE LOADS ON VEHICLE (LIVE INTO HOT CARGO AREA)
 MWPN(3,1) (CARD 340) = NUMBER OF PALLETS IN OFF-STATION ISSUE FOR INERT WAREHOUSE ADJACENT TO PACKING AND SHIPPING
 MWPN(3,2) (CARD 351) = NUMBER OF PALLETS IN OFF-STATION ISSUE FOR INERT WAREHOUSE NOT ADJACENT TO PACKING AND SHIPPING
 MWPN(4,1) (CARD 357) = NUMBER OF PALLETS IN OFF-STATION ISSUE OF LIVE EXPLOSIVE BULK
 MWPN(5,1) (CARD 361) = NUMBER OF FORKLIFTABLE LOADS TO GO BY TRUCK (INERT ISSUE TO BOMB BUILDUP AREA)
 MWPN(5,2) (CARD 362) = NUMBER OF FORKLIFTABLE LOADS TO GO BY STRADDLE TRUCK (INERT ISSUE TO BOMB BUILDUP AREA)
 MWPN(5,3) (CARD 363) = NUMBER OF NON-FORKLIFTABLE LOADS LESS THAN OR EQUAL TO 4K (INERT ISSUE TO BOMB BUILDUP AREA)
 MWPN(5,4) (CARD 364) = NUMBER OF NON-FORKLIFTABLE LOADS GREATER THAN 4K (INERT ISSUE TO BOMB BUILDUP AREA)
 MWPN(5,5) (CARD 365) = NUMBER OF FORKLIFTABLE LOADS (LIVE EXPLOSIVE ISSUE TO BOMB BUILDUP AREA)
 MWPN(5,6) (CARD 369) = NUMBER OF NON-FORKLIFTABLE LOADS (LIVE EXPLOSIVE ISSUE TO BOMB BUILDUP AREA)

HALFWORD MATRIX TBLB

ROW/COLUMN	1	2	3	4	5	6
1	0	4	1	C	0	0
2	C	2	1	0	C	0
3	4	4	0	C	C	0
4	3	0	0	C	0	0
5	12	C	0	0	5	0

MATRIX MWPN CONSISTS OF USER DEFINED INPUT VALUES
(DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

MWPN(1,1) (CARD 371) = NUMBER OF FORKLIFTABLE LOADS OF INERT MATERIAL IN ONE GROUPING OF ASSEMBLED WEAPONS
 MWPN(1,2) (CARD 373) = NUMBER OF NON-FORKLIFTABLE LOADS OF INERT MATERIAL IN ONE GROUPING OF ASSEMBLED WEAPONS
 MWPN(1,3) (CARD 375) = NUMBER OF FORKLIFTABLE LOADS OF LIVE EXPLOSIVES IN ONE GROUPING OF ASSEMBLED WEAPONS
 MWPN(1,4) (CARD 377) = NUMBER OF NON-FORKLIFTABLE LOADS OF LIVE EXPLOSIVES IN ONE GROUPING OF ASSEMBLED WEAPONS
 MWPN(1,5) (CARD 379) = NUMBER OF ASSEMBLED WEAPONS IN ONE GROUPING

HALFWORD MATRIX MWPN

ROW/COLUMN	1	2	3	4	5
1	1	0	3	0	1

MATRIX AAA1 IS THE THROUGHPUT MATRIX (FOR GENERAL EXPLANATION SEE CARD NUMBER 555)
(DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

INPUTS TO STATION RECEIVING, ISSUING AND STORAGE:

COLUMN 1 - NUMBER OF PALLETS INTO RECEIVING (CARD 591)
COLUMN 2 - NUMBER OF NON-FORKLIFTABLE LOADS INTO RECEIVING (CARD 554)
COLUMN 3 - NUMBER OF LIVE EXPLOSIVE PALLETS INTO HOT CARGO AREA (CARD 597)
COLUMN 4 - NUMBER OF LIVE EXPLOSIVE NON-FORKLIFTABLE LOADS INTO HOT CARGO AREA (CARD 600)
COLUMN 5 - NUMBER OF INERT PALLETS FROM WAREHOUSE TO BE ISSUED FOR OFF-STATION (CARD 603)
COLUMN 6 - NUMBER OF INERT PALLETS FROM WAREHOUSE TO BE ISSUED TO BOMB BUILDUP AREA (CARD 606)
COLUMN 7 - NUMBER OF NON-FORKLIFTABLE INERT ITEMS FROM WAREHOUSE TO BE ISSUED TO BOMB BUILDUP AREA (CARD 609)
COLUMN 8 - NUMBER OF LIVE EXPLOSIVE PALLETS FROM MAGAZINES TO BE ISSUED FOR OFF-STATION (CARD 633)
COLUMN 9 - NUMBER OF LIVE EXPLOSIVE PALLETS FROM MAGAZINES TO BE ISSUED FOR BOMB BUILDUP AREA (CARD 636)
COLUMN 10 - NUMBER OF NON-FORKLIFTABLE LIVE EXPLOSIVE LOADS FROM MAGAZINES TO BE ISSUED FOR BOMB BUILDUP AREA (CARD 639)

OUTPUTS FROM WEAPONS RECEIVING, ISSUING AND STORAGE:

COLUMN 11 - NUMBER OF INERT FORKLIFTABLE LOADS FROM WEAPONS MATERIAL RECEIVING GOING INTO WEAPONS WAREHOUSING (CARD 612)
COLUMN 12 - NUMBER OF INERT NON-FORKLIFTABLE LOADS FROM WEAPONS MATERIAL RECEIVING GOING INTO WEAPONS WAREHOUSING (CARD 615)
COLUMN 13 - NUMBER OF LIVE EXPLOSIVE NON-FORKLIFTABLE LOADS FROM HOT CARGO AREA GOING INTO MAGAZINE (CARD 618)
COLUMN 14 - NUMBER OF LIVE EXPLOSIVE FORKLIFTABLE LOADS FROM WEAPONS MATERIAL RECEIVING GOING INTO MAGAZINE (CARD 621)
COLUMN 15 - NUMBER OF INERT PALLETS ISSUED FROM PACKING AND SHIPPING GOING TO OFF-STATION USERS (CARD 624)
COLUMN 16 - NUMBER OF INERT PALLETS FROM INERT WAREHOUSE GOING TO BOMB BUILDUP AREA (CARD 627)
COLUMN 17 - NUMBER OF NON-FORKLIFTABLE INERT LOADS FROM INERT WAREHOUSE GOING TO BOMB BUILDUP AREA (CARD 630)
COLUMN 18 - NUMBER OF LIVE EXPLOSIVE PALLETS FROM MAGAZINES GOING TO PACKING AND SHIPPING FOR OFF-STATION (CARD 642)
COLUMN 19 - NUMBER OF LIVE EXPLOSIVE PALLETS FROM MAGAZINES GOING TO BOMB BUILDUP AREA (CARD 646)
COLUMN 20 - NUMBER OF NON-FORKLIFTABLE LIVE EXPLOSIVE LOADS FROM MAGAZINES GOING TO BOMB BUILDUP AREA (CARD 649)

INPUTS TO CONSOLIDATION WEAPONS HANDLING:

COLUMN 21 - NUMBER OF LIVE EXPLOSIVE PALLETS ISSUED FROM MAGAZINES ENTERING PACKING AND SHIPPING FOR OFF-STATION (CARD 652)
COLUMN 22 - NUMBER OF INERT PALLETS COMING INTO BOMB BUILDUP AREA FROM INERT WAREHOUSE (CARD 656)
COLUMN 23 - NUMBER OF NON-FORKLIFTABLE INERT LOADS LEAVING INERT WAREHOUSE GOING TO BOMB BUILDUP AREA (CARD 659)
COLUMN 24 - NUMBER OF FORKLIFTABLE LIVE EXPLOSIVE LOADS COMING INTO BOMB BUILDUP AREA FROM MAGAZINES (CARD 662)
COLUMN 25 - NUMBER OF NON-FORKLIFTABLE LIVE EXPLOSIVE LOADS COMING INTO BOMB BUILDUP AREA FROM MAGAZINES (CARD 665)

OUTPUTS FROM CONSOLIDATION WEAPONS HANDLING:

COLUMN 26 - NUMBER OF LIVE EXPLOSIVE PALLETS ISSUED IN BULK LEAVING PACKING AND SHIPPING FOR OFF-STATION (CARD 668)
COLUMN 27 - NUMBER OF FORKLIFTABLE WEAPONS LEAVING BOMB BUILDUP AREA FOR ON-STATION (CARD 671)
COLUMN 28 - NUMBER OF NON-FORKLIFTABLE WEAPONS LEAVING BOMB BUILDUP AREA FOR ON-STATION (CARD 674)
COLUMN 29 - NUMBER OF FORKLIFTABLE WEAPONS LEAVING BOMB BUILDUP AREA FOR OFF-STATION (CARD 677)
COLUMN 30 - NUMBER OF NON-FORKLIFTABLE WEAPONS LEAVING BOMB BUILDUP AREA FOR OFF-STATION (CARD 680)

HALF-BOUNDED MATRIX AAA1

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	24	0	8	0	12	24	0	24	0	0
2	48	0	16	0	24	48	0	48	0	0
3	72	0	24	0	36	72	0	72	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0

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USER'S MANUAL AND ANALYSIS PROCEDURES FOR THE MATERIAL
HANDLING EQUIPMENT SIMULATION MODELS(U) DAVID TAYLOR
RESEARCH CENTER BETHESDA MD P E FRIEDENBERG ET AL.

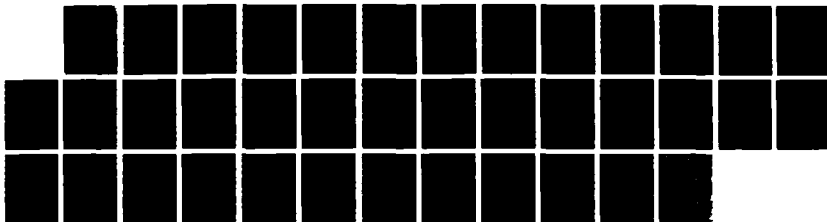
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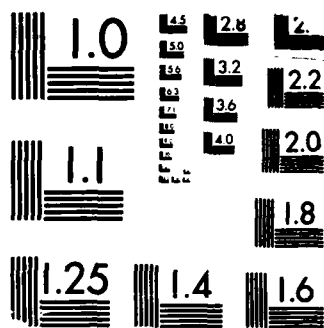
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MICROCOPY RESOLUTION TEST CHART
 JRF AU 100 STANDARDS-1963-A

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[illegible]

RAD6/COLUMN

	21	22	23	24	25	26	27	28	29	30
1	6	24	0	18	0	6	0	1	3	0
2	12	48	0	36	0	12	0	1	7	0
3	18	72	C	54	C	18	0	1	10	0
4	0	0	C	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	C	1	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	C	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	C	0	C	0	0	0	0	0

DETAILED EQUIPMENT DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING
EQUIPMENT NOT ASSIGNED TO REPAIR SHOPS ARE LOCATED IN/AROUND THE PIER AREA

FL0A = 4K FORKLIFTS (GROUP 21V) (CARD 4)
FL0A = 6K FORKLIFTS (GROUP 11V) (CARD 5)
FLCA = EQUAL TO OR GREATER THAN 10K FORKLIFTS (GROUP 31V) (CARD 6)
FLCB = EQUAL TO OR GREATER THAN 10K FORKLIFTS (GROUP 32V) ASSIGNED TO REPAIR SHOPS (CARD 8)
CREA = EQUAL TO OR GREATER THAN 10K CRANES (GROUP 51V) (CARD 10)
CREB = EQUAL TO OR GREATER THAN 10K CRANES (GROUP 52V) ASSIGNED TO REPAIR SHOPS (CARD 11)
STRA = STRADDLE TRUCKS (GROUP 61V) (CARD 13)
FLAB = 6K FORKLIFTS (GROUP 12V) ASSIGNED TO REPAIR SHOPS (CARD 14)
FLBB = 4K FORKLIFTS (GROUP 22V) ASSIGNED TO REPAIR SHOPS (CARD 16)
SL0B = SIDELOADERS (GROUP 72V) ASSIGNED TO REPAIR SHOPS (CARD 16)

THE EQUIPMENT UTILIZATION

EQUIPMENT	NUMBER AVAILABLE	AVERAGE NUMBER USED	UTILIZATION	TOTAL NUMBER OF TIMES USED	AVERAGE TIME USED (MINUTES)	NUMBER CURRENTLY IN USE	MAXIMUM NUMBER USED
STORAGE	CAPACITY	AVERAGE CONTENTS	AVERAGE UTILIZATION	ENTRIES	AVERAGE TIME/TRAM	CURRENT CONTENTS	MAXIMUM CONTENTS
FL0A	57	23.994	0.421	622	18.516	0	57
FL0A	36	15.077	0.419	419	17.272	0	36
FLCA	27	10.204	0.378	514	9.529	0	27
FLCB	15	6.375	0.625	90	50.000	15	15
CREA	2	1.221	0.610	408	1.436	0	2
CREB	4	0.417	0.104	20	10.000	0	4
FLAB	25	15.625	0.625	190	50.000	25	25
FL0B	49	7.790	0.159	75	49.653	13	13

TOTAL NUMBER OF PIECES OF EQUIPMENT = 221
OVERALL UTILIZATION = 37 PERCENT

SINGLE VALUED INPUT PARAMETERS AS DEFINED BY USER FOR THIS RUN
(INITIALIZED DEFINITIONS AND TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

TBLA1	1	(CARD 25)	- NUMBER OF INITIALIZED IN COLUMN 1 OF TBLA
TBLA3	1	(CARD 26)	- NUMBER OF INITIALIZED IN COLUMN 3 OF TBLA
TBLA5	1	(CARD 27)	- NUMBER OF INITIALIZED IN COLUMN 5 OF TBLA
TPFA	7	(CARD 28)	- TIME FOR A 4/6/10K FL TO TRANSFER PALLETIZED LOAD (TEMPORARY SERVICES) NEAR PIER
TPFB	7	(CARD 31)	- TIME FOR A 4/6/10K FL TO TRANSFER PALLETIZED LOAD (TEMPORARY SERVICES) ONTO PIER
TPFC	30	(CARD 34)	- TIME FOR A 4/6/10K FL TO CONNECT PALLETIZED LOAD (TEMPORARY SERVICES) TO SHIP
TPFD	7	(CARD 37)	- TIME FOR A 4/6/10K FL TO MOVE PALLETIZED RIPOUT ITEM FROM LWR DECK TO TEMP LOC (PIER)
TPFE	7	(CARD 41)	- TIME FOR A 4/6/10K FL TO MOVE PALLETIZED RIPOUT ITEM FROM TEMP LOC TO TEMP STG (PIER)
TPFA	10	(CARD 45)	- TIME FOR A 10K CRANE TO LAG/UNLOAD HEAVY BULKY LOAD ONTO/FROM TRUCK
TPFB	10	(CARD 49)	- TIME FOR A 10K CRANE TO MOVE HEAVY BULKY LOAD FROM NEAR TO ONTO PIER (TEMP SERVICES)
TPFC	30	(CARD 52)	- TIME FOR 10K CRANE TO CONNECT HEAVY BULKY LOAD (TEMPORARY SERVICES) TO SHIP
TPFD	1	(CARD 55)	- TIME FOR 10K CRANE TO MOVE HEAVY BULKY RIPOUT ITEM FROM LWR DECK TO TEMP LOC (PIER)
TPFE	7	(CARD 59)	- TIME FOR A TRUCK TO TRANSIT NEAR PIER (TEMPORARY SERVICES)
TPFA	0	(CARD 61)	- TIME FOR 10K CRANE TO TRANSIT NEAR PIER (TEMPORARY SERVICES)
TPFB	1	(CARD 64)	- TIME FOR 10K CRANE TO TRANSFER RIPOUT MATERIAL FROM UPPER DECK TO TEMP LOC (PIER)
TPFC	0	(CARD 68)	- MATERIAL HANDLING DELAY TIME BEFORE CUTTING HOLES IN SHIP HULL
TPFD	1	(CARD 70)	- 1 IF HOLES TO BE CUT IN SHIP WITH USE OF FORKLIFTS - 0 IF OTHERWISE
TPFE	0	(CARD 73)	- NUMBER OF 4K FORKLIFTS USED WHEN CUTTING HOLES IN SHIP HULL
TPFA	60	(CARD 75)	- TIME 4K FORKLIFTS USED TO CUT HOLES IN SHIP HULL
TPFB	2	(CARD 77)	- NUMBER OF 6K FORKLIFTS USED WHEN CUTTING HOLES IN SHIP HULL
TPFC	60	(CARD 79)	- TIME 6K FORKLIFTS USED TO CUT HOLES IN SHIP HULL
TPFD	0	(CARD 81)	- FRACTION OF TIME WE WANT TO USE GROUP 91Y STRADDLE TRUCKS INSTEAD OF FORKLIFTS
TPFE	20	(CARD 86)	- TIME FOR 4/6/10K FL TO MOVE PALLETIZED RIPOUT ITEM FROM PIER TO REPAIR SHOPS + ATRN
TPFA	1000	(CARD 90)	- FRACTION OF TIME RIPOUT ITEMS MOVED FROM PIER TO REPAIR SHOPS BY FL INSTEAD OF TRUCK
TPFB	0	(CARD 96)	- FRACTION OF TIME RIPOUT ITEMS MOVED FROM PIER TO REPAIR SHOPS BY TRUCK INSTEAD OF FL
TPFC	1000	(CARD 102)	- FRACTION OF HEAVY BULKY RIPOUT ITEMS WHICH ARE NON-ELONGATED
TPFD	0	(CARD 105)	- FRACTION OF HEAVY BULKY RIPOUT ITEMS WHICH ARE ELONGATED
TPFE	4	(CARD 109)	- TIME FOR 10K FORKLIFT TO LOAD PALLETIZED RIPOUT ITEM ONTO FLATBED TRUCK
TPFA	10	(CARD 113)	- TIME FOR FLATBED TRUCK TO GO FROM TEMPORARY STAGING (PIER) TO REPAIR SHOPS
TPFB	10	(CARD 114)	- TIME FOR FLATBED TRUCK TO GO FROM TEMPORARY LOCATION (PIER) TO REPAIR SHOPS
TPFC	5	(CARD 117)	- MINIMUM NUMBER OF PALLETS REQUIRED FOR USED OF STRADDLE TRUCK
TPFD	7	(CARD 119)	- MAXIMUM NUMBER OF PALLETS STRADDLE TRUCK CAN CARRY
TPFE	2	(CARD 121)	- TIME FOR STRADDLE TRUCK TO GO FROM TEMPORARY STAGING (PIER) TO REPAIR SHOPS
TPFA	2	(CARD 124)	- TIME FOR 4/6K FORKLIFT TO LINE UP ONE PALLET FOR A STRADDLE TRUCK
TPFB	2	(CARD 126)	- TIME FOR 5/10K FL TO MOVE ELNGTD HWY BULKY RIPOUT ITEM FROM OUTSIDE TO INSIDE REPAIR SHP
TPFC	7	(CARD 129)	- TIME FOR 10K FL TO MOVE NON-ELNGTD HWY BULKY RIPOUT ITEM FROM OUTSIDE TO INSIDE RPR SHP
TPFD	18	(CARD 133)	- TIME FOR 10K FL TO UNLOAD PALLET FROM TRUCK, MOVE TO INSIDE REPAIR SHOP AND RETURN
TPFE	15	(CARD 138)	- TIME FOR 4/6K FL TO MOVE PALLET FROM OUTSIDE TO INSIDE REPAIR SHOP AND RETURN
TPFA	60	(CARD 142)	- TIME FOR LESS THAN 4K PALLETIZED RIPOUT ITEM TO BE SERVICED BY REPAIR SHOPS
TPFB	60	(CARD 144)	- TIME FOR BETWEEN 4K AND 6K PALLETIZED RIPOUT ITEM TO BE SERVICED BY REPAIR SHOPS
TPFC	60	(CARD 147)	- TIME FOR GREATER THAN 6K PALLETIZED RIPOUT ITEM TO BE SERVICED BY REPAIR SHOPS
TPFD	60	(CARD 149)	- TIME FOR ELONGATED HEAVY BULKY RIPOUT ITEM TO BE SERVICED BY REPAIR SHOPS
TPFE	60	(CARD 152)	- TIME FOR NON-ELONGATED HEAVY BULKY RIPOUT ITEM TO BE SERVICED BY REPAIR SHOPS

MATRIX TBL4 CONSISTS OF USER DEFINED INPUT VALUES
(DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

COLUMN 1 (CARD 154) = HOURS AT WHICH SHIP PREARRIVALS OCCUR
COLUMN 2 (CARD 161) = NUMBERS OF SHIP PREARRIVALS IN COLUMN 1
COLUMN 3 (CARD 163) = HOURS FOR STAGING OF TEMPORARY SERVICES ONTO PIER
COLUMN 4 (CARD 165) = NUMBERS OF STAGINGS SPECIFIED IN COLUMN 3
COLUMN 5 (CARD 167) = HOURS AT WHICH SHIP ARRIVALS OCCUR
COLUMN 6 (CARD 168) = NUMBERS OF SHIP ARRIVALS IN COLUMN 5

HALFWORD MATRIX TBL4

ROW/COLUMN	1	2	3	4	5	6
1	C	1	0	1	4	1
2	0	0	0	0	0	0
3	0	0	C	0	0	0
4	C	0	0	0	0	0
5	0	0	0	0	0	0
6	C	0	C	0	0	0
7	C	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	C	C	C	0	0	0
11	0	0	C	0	0	0
12	0	0	C	0	0	0
13	0	0	C	0	0	0
14	0	0	C	0	0	0
15	0	0	C	0	0	0
16	0	0	0	0	0	0
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	0	0	0	0
21	0	0	0	0	0	0
22	0	0	C	0	0	0
23	0	0	C	0	0	0
24	0	0	C	0	0	0
25	0	0	0	0	0	0
26	0	0	C	0	0	0
27	0	0	C	0	0	0
28	0	0	C	0	0	0
29	0	0	0	0	0	0
30	0	0	C	0	0	0

MATRIX TBLB CONSISTS OF USER DEFINED INPUT VALUES
(DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

TBLB(1,1) (CARD 172) = NUMBER OF PALLETIZED LOADS LESS THAN 4K (SHIP PREARRIVALS)
 TBLB(1,2) (CARD 173) = NUMBER OF PALLETIZED LOADS BETWEEN 4K AND 6K (SHIP PREARRIVALS)
 TBLB(1,3) (CARD 174) = NUMBER OF PALLETIZED LOADS GREATER THAN 6K (SHIP PREARRIVALS)
 TBLB(1,4) (CARD 175) = NUMBER OF HEAVY BULKY LOADS (SHIP PREARRIVALS)
 TBLB(2,1) (CARD 176) = NUMBER OF PALLETIZED RIPOUT ITEMS LESS THAN 4K TO BE TRANSFERRED FROM LOWER DECK TO TEMP LOC (PIER)
 TBLB(2,2) (CARD 179) = NUMBER OF PALLETIZED RIPOUT ITEMS BETWEEN 4K AND 6K TO BE TRANSFERRED FROM LOWER DECK TO TEMP LOC (PIER)
 TBLB(2,3) (CARD 180) = NUMBER OF PALLETIZED RIPOUT ITEMS GREATER THAN 6K TO BE TRANSFERRED FROM LOWER DECK TO TEMP LOC (PIER)
 TBLB(2,4) (CARD 181) = NUMBER OF HEAVY BULKY RIPOUT ITEMS TO BE TRANSFERRED FROM LOWER DECK TO TEMP LOC (PIER)
 TBLB(3,1) (CARD 184) = NUMBER OF PALLETIZED RIPOUT ITEMS LESS THAN 4K TO BE TRANSFERRED FROM UPPER DECK TO TEMP LOC (PIER)
 TBLB(3,2) (CARD 185) = NUMBER OF PALLETIZED RIPOUT ITEMS BETWEEN 4K AND 6K TO BE TRANSFERRED FROM UPPER DECK TO TEMP LOC (PIER)
 TBLB(3,3) (CARD 186) = NUMBER OF PALLETIZED RIPOUT ITEMS GREATER THAN 6K TO BE TRANSFERRED FROM UPPER DECK TO TEMP LOC (PIER)
 TBLB(3,4) (CARD 187) = NUMBER OF HEAVY BULKY RIPOUT ITEMS TO BE TRANSFERRED FROM UPPER DECK TO TEMP LOC (PIER)

HALFWORD MATRIX TBLB

ROW/COLUMN	1	2	3	4
1	90	15	20	0
2	400	60	60	10
3	800	160	100	10

MATRIX AAA1 IS THE THROUGHPUT MATRIX (FOR GENERAL EXPLANATION SEE CARD NUMBER 340)
 DETAILED DEFINITIONS ARE TO BE FOUND AT THE INDICATED CARD NUMBERS IN THE MAIN PROGRAM LISTING)

INPUTS TO THE PIER AREA

- COLUMN 1 = NUMBER OF PALLETIZED LOADS OF TEMPORARY SERVICES MATERIAL (CARD 346)
 - COLUMN 2 = NUMBER OF HEAVY BULKY LOADS OF TEMPORARY SERVICES MATERIAL (CARD 350)
 - COLUMN 3 = NUMBER OF PALLETIZED RIPOUT ITEMS COMING FROM LOWER DECK (CARD 352)
 - COLUMN 4 = NUMBER OF PALLETIZED RIPOUT ITEMS COMING FROM UPPER DECK (CARD 354)
 - COLUMN 5 = NUMBER OF HEAVY BULKY RIPOUT ITEMS COMING FROM LOWER DECK (CARD 356)
 - COLUMN 6 = NUMBER OF HEAVY BULKY RIPOUT ITEMS COMING FROM UPPER DECK (CARD 358)
- OUTPUTS FROM THE PIER AREA:
- COLUMN 7 = NUMBER OF PALLETIZED LOADS OF TEMPORARY SERVICES MATERIAL CONNECTED TO SHIP (CARD 360)
 - COLUMN 8 = NUMBER OF HEAVY BULKY LOADS OF TEMPORARY SERVICES MATERIAL CONNECTED TO SHIP (CARD 363)
 - COLUMN 9 = NUMBER OF PALLETIZED RIPOUT ITEMS MOVED FROM PIER TO REPAIR SHOPS VIA FORKLIFTS (CARD 366)
 - COLUMN 10 = NUMBER OF PALLETIZED RIPOUT ITEMS MOVED FROM PIER TO REPAIR SHOPS VIA TRUCKS (CARD 369)
 - COLUMN 11 = NUMBER OF PALLETIZED RIPOUT ITEMS MOVED FROM PIER TO REPAIR SHOPS VIA STRADDLE TRUCKS (CARD 372)
 - COLUMN 12 = NUMBER OF HEAVY BULKY RIPOUT ITEMS GOING FROM PIER TO REPAIR SHOPS VIA TRUCKS (CARD 375)

INPUTS TO THE REPAIR SHOPS:

- COLUMN 13 = NUMBER OF PALLETIZED RIPOUT ITEMS COMING INTO REPAIR SHOPS FROM OUTSIDE REPAIR SHOPS (CARD 378)
- COLUMN 14 = NUMBER OF HEAVY BULKY RIPOUT ITEMS COMING INTO REPAIR SHOPS FROM OUTSIDE REPAIR SHOPS (CARD 381)

OUTPUTS FROM THE REPAIR SHOPS:

- COLUMN 15 = NUMBER OF PALLETIZED RIPOUT ITEMS GOING OUT OF REPAIR SHOPS (CARD 383)
- COLUMN 16 = NUMBER OF HEAVY BULKY RIPOUT ITEMS GOING OUT OF REPAIR SHOPS (CARD 385)

HALFWOOD MATRIX AAA1

ROW/COLUMN	1	2	3	4	5	6	7	8	9	10
1	125	0	0	0	0	0	0	0	0	0
2	125	0	540	1060	10	10	125	0	512	0
3	125	0	540	1060	10	10	125	0	1600	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0

HALFWOOD MATRIX AAA1

ROW/COLUMN	11	12	13	14	15	16
1	0	0	0	0	0	0
2	0	0	0	0	64	0
3	0	20	0	20	170	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0

FOR/COLUPM	11	12	13	14	15	16
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0

BLOCK NUMBER	*LOC	OPERATION	A,B,C,D,E,F,G,H,I,J	COMMENTS	CARD NUMBER
1	*	COLUMN 16 =	ACCUMULATED NUMBER OF HEAVY BULKY PIPOUT ITEMS GOING		385
	*	CULT MATRX	ULT OF REPAIR SHOPS (402 OUT)		386
	*		K,3,12	OVERALL UTILIZATION MATRIX	387
	*				388
	*				389
	*				390
	*				391
	*				392
	*				393
	*				394
	*				395
	*				396
	*				397
	*				398
	*				399
	*				400
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	*				428
	*				429
	*				430
	*				431
	*				432
	*				433
	*				434
	*				435
	*				436
	*				437
	*				438
	*				439

BLOCK
NUMBER

*LOC CFCNATION A,B,C,D,E,F,G,H,I,J COMMENTS

BLOCK
NUMBERCARD
NUMBER

* COMING INTO REPAIR SHOPS FROM OUTSIDE REPAIR
 * SHOPS (402 IN)
 * (1,13) - ACCUMULATED NUMBER OF PALLETIZED RIPOUT ITEMS
 * GOING OUT OF REPAIR SHOPS (402 OUT)
 * (1,14) - ACCUMULATED NUMBER OF HEAVY BULKY RIPOUT ITEMS
 * GOING OUT OF REPAIR SHOPS (402 OUT)
 * (1,15) - ACCUMULATED NUMBER OF HEAVY BULKY RIPOUT ITEMS
 * GOING FROM LOWER DECK (401 IN)
 * (1,16) - ACCUMULATED NUMBER OF HEAVY BULKY RIPOUT ITEMS
 * GOING FROM UPPER DECK (401 IN)
 * (1,17) - THROUGHPUT MATRIX. VALUES ARE
 * CUMULATIVE OVER TIME. THE VALUES IN THE FIRST ROW ARE FOR
 * THE FIRST 6 HOURS OF THE RUN; THE VALUES IN THE SECOND ROW
 * ARE FOR THE FIRST 16 HOURS OF THE RUN; THE VALUES IN THE
 * THIRD ROW ARE FOR THE FIRST 24 HOURS OF THE RUN; AND SO
 * ON, EACH SUCCESSIVE ROW GIVING CUMULATIVE VALUES
 * REPRESENTATIVE OF THE SITUATION AFTER THE PASSAGE OF
 * 8 MORE HOURS OF TIME.
 * COLUMN 1 - ACCUMULATED INPUT MATERIAL BY NUMBER OF PALLETIZED
 * LOADS OF TEMPORARY SERVICES MATERIAL (401 IN)
 * COLUMN 2 - ACCUMULATED INPUT MATERIAL BY NUMBER OF HEAVY BULKY
 * LOADS OF TEMPORARY SERVICES MATERIAL (401 IN)
 * COLUMN 3 - ACCUMULATED NUMBER OF PALLETIZED RIPOUT ITEMS COMING
 * FROM LOWER DECK (401 IN)
 * COLUMN 4 - ACCUMULATED NUMBER OF PALLETIZED RIPOUT ITEMS COMING
 * FROM UPPER DECK (401 IN)
 * COLUMN 5 - ACCUMULATED NUMBER OF HEAVY BULKY RIPOUT ITEMS COMING
 * FROM LOWER DECK (401 IN)
 * COLUMN 6 - ACCUMULATED NUMBER OF HEAVY BULKY RIPOUT ITEMS COMING
 * FROM UPPER DECK (401 IN)
 * COLUMN 7 - ACCUMULATED OUTPUT MATERIAL BY NUMBER OF PALLETIZED
 * LOADS OF TEMPORARY SERVICES MATERIAL CONNECTED
 * TO SHIP (401 OUT)
 * COLUMN 8 - ACCUMULATED OUTPUT MATERIAL BY NUMBER OF HEAVY BULKY
 * LOADS OF TEMPORARY SERVICES MATERIAL CONNECTED
 * TO SHIP (401 OUT)
 * COLUMN 9 - ACCUMULATED NUMBER OF PALLETIZED RIPOUT ITEMS MOVED
 * FROM PIER (TEMPORARY STAGING) TO REPAIR SHOPS
 * (TEMPORARY LOCATION) VIA FORKLIFTS (401 OUT)
 * COLUMN 10 - ACCUMULATED NUMBER OF PALLETIZED RIPOUT ITEMS MOVED
 * FROM PIER (TEMPORARY STAGING) TO REPAIR SHOPS
 * (TEMPORARY LOCATION) VIA TRUCKS (401 OUT)
 * COLUMN 11 - ACCUMULATED NUMBER OF PALLETIZED RIPOUT ITEMS MOVED
 * FROM PIER (TEMPORARY STAGING) TO REPAIR SHOPS
 * (TEMPORARY LOCATION) VIA STRADDLE TRUCKS (401 OUT)
 * COLUMN 12 - ACCUMULATED NUMBER OF HEAVY BULKY RIPOUT ITEMS GOING
 * FROM PIER (TEMPORARY LOCATION) TO REPAIR SHOPS
 * VIA TRUCKS (401 OUT)
 * COLUMN 13 - ACCUMULATED NUMBER OF PALLETIZED RIPOUT ITEMS COMING
 * INTO REPAIR SHOPS FROM OUTSIDE REPAIR SHOPS
 * (402 IN)
 * COLUMN 14 - ACCUMULATED NUMBER OF HEAVY BULKY RIPOUT ITEMS COMING
 * INTO REPAIR SHOPS FROM OUTSIDE REPAIR SHOPS (402 IN)
 * COLUMN 15 - ACCUMULATED NUMBER OF PALLETIZED RIPOUT ITEMS GOING
 * OUT OF REPAIR SHOPS (402 OUT)

APPENDIX D
NETEDF

[illegible]

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PROGRAM 'NETEN'
PROGRAM 'NETEDF'
PROGRAM 'NETEDP'

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PURPOSE
TEXT EDITOR (MODELED AFTER THE STANDARD ARPANET EDITOR)

FUNCTIONAL CATEGORY: 10 59

EXECUTION

```

EXECUTE CARD PARAMETERS
  NETFD,LFN,ASCII.
    LFN      - FILE TO BE CREATED OR EDITED
               IF OMITTED, NETED WILL REQUEST IT
  ASCII     - IF OMITTED - LFN IS STANDARD CDC DISPLAY
               CODE
               IF SPECIFIED - LFN IS 7-BIT ASCII FILE

```

DEFAULT EXECUTE CARD
NO MEANINGFUL DEFAULT VALUES

REMARKS

THIS PAGE IS NOT A PART OF THE DOCUMENT. IT IS INCLUDED FOR
PROCESSING BY PROGRAMS 'EXECARD' AND 'PURPOSE'.

TWO MODIFIED VERSIONS OF NETED ARE AVAILABLE, NETEDF AND NETEGR. SEE PAGE 2C FOR THE DIFFERENCES, WHICH ARE FLAGGED IN THE MAIN DOCUMENT WITH AN ASTERISK (*) AT THE END OF THE LINE.

INTRODUCTION

NETED IS A TEXT EDITOR MODELED AFTER THE STANDARD ARPANET EDITOR. IT WAS ACQUIREDED FROM ED FORTY OF LAWRENCE BERKELEY LABS, IMPLEMENTED AT DTNSRDC BY THE CONSTRUCTION ENGINEERING RESEARCH LABORATORY (CERL) COMPUTER SERVICES BRANCH, AND MAINTAINED BY DTNSRDC. WE SOLICIT YOUR COMMENTS AND SUGGESTIONS ABOUT NETED AND THIS WRITEUP.

NETED HAS SEVERAL ADVANTAGES OVER THE STANDARD INTERCOM EDITOR. THEY INCLUDE:

1. LOW COST -- INEXPENSIVE TO USE
2. DOES NOT REQUIRE LINE NUMBERING
3. ALLOWS THE MERGING OF FILES
4. DOES NOT LIMIT THE SIZE OF SEARCH AND REPLACEMENT STRINGS
5. SUPPORTS FULL ASCII UPPER AND LOWER CASE FILES
6. IS NOT A MULTI-USER-JOB, IF IT DOES HANG IT MAY BE ABORTED
7. USES ONLY A SMALL AMOUNT OF MEMORY (CURRENTLY LESS THAN 12K OCT)

NETED WORKS IN TWO DISTINCT MODES -- INPUT MODE AND EDIT MODE. IN INPUT MODE, LINES READ FROM THE TERMINAL ARE ENTERED DIRECTLY INTO THE FILE. A LINE CONSISTING OF ONLY A PERIOD HAS MEANING; THAT IS RETURN TO EDIT MODE.

IN EDIT MODE THERE ARE A NUMBER OF COMMANDS WHICH ALLOW YOU TO EASILY LOCATE LINES, ADD, DELETE, AND REPLACE LINES, CHANGE PARTS OF LINES, MOVE YOUR POINT OF INTERACTION WITH THE FILE ('THE POINTER'), INSERT AN ENTIRE FILE AT ANY POINT IN THE FILE YOU ARE EDITING, SAVE THE FILE YOU ARE EDITING, AND MAKE A COPY OF ALL OR PART OF THE FILE ON ANOTHER FILE.

ENTERING NETED

NETED IS AVAILABLE ON THE DTNSRDC CDC 6000 COMPUTERS. TO USE IT, YOU MUST FIRST ATTACH IT BY ENTERING:

ATTACH,NETED

EACH TIME YOU WISH TO ENTER NETED TYPE:

NETED OR, NETED,LFN OR, NETED,LFN,CH=AS

IF YOU ENTER ONLY NETED, NETED WILL ASK YOU FOR THE NAME OF THE FILE TO EDIT.

NETED ALLOWS FILES TO HAVE A MAXIMUM LINE SIZE OF 140 CHARACTERS. IF THE FILE HAS LONGER LINES, NETED WILL TRUNCATE THEM AND ISSUE A WARNING MESSAGE.

FOR EXTENSIVE EDITING OF VERY LARGE FILES, IT MAY BE NECESSARY TO INCREASE THE TIME LIMIT BEFORE ENTERING NETED. USE 'ETL,<LIMIT>'.

THE PRESENCE OF CH AS AS THE SECOND PARAMETER ('ASCII') CAUSES NETED TO WORK IN ASCII MODE, WITH UPPER AND LOWER CASE CAPABILITY. CHARACTERS EXIST IN THE FILE AS 7-BIT ASCII CHARACTERS (5 PER WORD, RIGHT-JUSTIFIED IN A 12-BIT BYTE).

WARNING

ASCII MODE IS NOT COMPATIBLE WITH NORMAL MODE!
YOU CANNOT MIX FILES OF DIFFERENT MODES. CURRENTLY,
NETED IS THE ONLY SOFTWARE PRODUCT AVAILABLE TO US
WHICH SUPPORTS ASCII MODE.

PROGRAM 'ASDC' ON LIBRARY 'UTILITY' WILL CONVERT A NETED ASCII FILE TO CDC DISPLAY CODE AND VICE VERSA. TO USE:

BEGIN,UTILITY,,ASDC,INFILE,OUTFILE,TYPE,OUTPUT.

WHERE TYPE IS: A2C OR OMITTED - INFILE:ASCII; OUTFILE: DISPLAY CODE
ANYTHING ELSE - INFILE:DISPLAY CODE; OUTFILE:ASCII

THE DOCUMENT FOR THIS PROGRAM MAY BE PRINTED WITH:
BEGIN,DOCGET,,UTILITY,,ASDC,OUTPUT.

FILES AND OPERATION

THE FILE TO BE EDITED MUST BE A LOCAL FILE. IF IT IS AN ATTACHED PERMANENT FILE, NETED WILL NOT ALLOW IT TO BE OVERWRITTEN. IF THE FILE DOES NOT EXIST, NETED WILL REQUEST IT (*PF) WHEN IT IS WRITTEN.

END-OF-RECORD AND END-OF-FILE

NETED EDITS FILES WHICH CONTAIN RECORD MARKS. WHEN A FILE IS BROUGHT UNDER NETED, EACH RECORD MARK IS TURNED INTO A LINE CONSISTING ONLY OF 'EOR' (FOR END-OF-RECORD), OR 'EOF' (FOR END-OF-FILE). ON OUTPUT, EACH LINE OF THIS FORM ('EOR' OR 'EOF') IS CONVERTED TO ITS EQUIVALENT RECORD MARK.

----FUNDAMENTALS

THE POINTER

IN NETED, YOUR FILE IS CONCEIVED OF AS BEGINNING AT THE TOP AND EXTENDING TO THE BOTTOM, OR END. THERE IS A CONCEPTUAL POINTER, WHICH INDICATES THE CURRENT LINE IN THE FILE. IF YOU WISH TO ALTER A LINE, YOU MUST FIRST SET THE POINTER ON IT. WHEN YOU ADD A LINE, THE NEW LINE GOES AFTER THE CURRENT LINE AND THE NEW LINE ADDED BECOMES THE CURRENT LINE. THE NETED COMMAND STARTS YOU OFF WITH THE POINTER AT THE TOP OF YOUR FILE. WHEN YOU CHANGE BETWEEN INPUT AND EDIT MODE - IN EITHER DIRECTION - THE POINTER DOES NOT MOVE. TO SEE WHICH LINE THE POINTER IS ON, JUST TYPE 'P' (IN EDIT MODE).

THE FILE SHOULD NOT BE THOUGHT OF AS CIRCULAR, IN THAT THERE IS A REAL DIFFERENCE BETWEEN HAVING THE POINTER AT THE TOP OF THE FILE AND HAVING IT AT THE BOTTOM. THE TOP IS NOT THE NEXT POSITION AFTER THE BOTTOM.

MORE ON THE <BOTTOM> AND THE <TOP>

IN NETED, YOUR FILE CONTAINS TWO PSEUDO-LINES, THE <TOP OF FILE>, AND THE <BOTTOM OF FILE>. THESE REPRESENT THE POSITION OF THE POINTER WHEN IT LIES JUST IN FRONT OF THE FIRST LINE IN THE FILE, OR JUST AFTER THE LAST LINE IN THE FILE RESPECTIVELY. A LINE INSERTED WHEN THE POINTER IS AT THE TOP WILL GO IN FRONT OF THE PREVIOUS FIRST LINE -- A LINE ENTERED AT THE BOTTOM GOES AT THE END OF THE FILE. THE POINTER THEN POINTS TO THE LINE JUST ENTERED, AND THE BOTTOM WOULD BE JUST BELOW IT.

SINCE THE TOP AND BOTTOM POSITIONS ARE NOT REALLY LINES, EDIT MODE COMMANDS WHICH ATTEMPT TO CHANGE THEM HAVE NO EFFECT.

TOGGLE SWITCHES

NETED HAS TWO COMMANDS BEST THOUGHT OF AS REVERSING THE POSITION OF TOGGLE SWITCHES. THE PERIOD IS AN EXAMPLE. IT SIMPLY SAYS 'CHANGE MODES'. THE MODE YOU GET DEPENDS UPON WHICH MODE WAS IN EFFECT WHEN THE COMMAND WAS ISSUED. ISSUING A TOGGLE-TYPE COMMAND TWICE JUST LEAVES THINGS AS THEY WERE. THE OTHER TOGGLE-TYPE COMMAND IS V (TURNS ON AND OFF THE OPTIONAL PRINTING OF SOME COMMANDS), AND * (TURNS ON AND OFF THE NETED PROMPT OF E> OR I>).

TERMINAL OUTPUT --OPTIONAL RESPONSES

MOST OF NETED'S EDIT COMMANDS PRODUCE SOME KIND OF PRINTING AT YOUR TERMINAL IN RESPONSE. NETED INSISTS UPON GIVING SOME OF THESE RESPONSES, BUT ALLOWS YOU TO DISABLE THE PRINTING OF OTHERS. THOSE WHICH CAN BE DISABLED ARE CALLED 'OPTIONAL RESPONSES'. THE PRINTING OR SUPPRESSING OF OPTIONAL RESPONSES IS CONTROLLED BY THE TOGGLE SWITCH COMMAND V. THE COMMANDS WHICH GENERATE OPTIONAL RESPONSES ARE THE NEXT, LOCATE, FIND, LOCATE BACKWARD, FIND BACKWARD, CHANGE, AND REPEAT CHANGE COMMANDS.

COMMAND FORMAT

IN EDIT MODE, NETED WILL RECOGNIZE AND EXECUTE COMMANDS FROM THE LIST IN THE NEXT SECTION. THESE COMMANDS HAVE IN GENERAL THE FORM OF A LETTER IN COLUMN ONE FOLLOWED SOMETIMES BY PARAMETERS. A BLANK SPACE MUST SEPARATE THE LETTER FROM THE PARAMETERS ONLY IF THE PARAMETER STARTS WITH A LETTER, %, ., OR *. OTHERWISE THEY MAY FOLLOW THE COMMAND IMMEDIATELY. PARAMETERS MAY BE INTEGERS OR ALPHANUMERIC TEXT. IN THE FOLLOWING DISCUSSION, X WILL INDICATE AN INTEGER PARAMETER, STRING WILL INDICATE A STRING OF TEXT. A 'S' IS ALLOWED AS AN INTEGER PARAMETER, AND IS A SHORTHAND NOTATION FOR A VERY LARGE NUMBER, WHICH WILL FORCE MOST COMMANDS TO EXECUTE TO THE BOTTOM OF FILE. THE STRINGS MAY CONTAIN LEADING AND INTERNAL BLANKS, AND THESE BLANKS WILL BE SIGNIFICANT. FOR THE F, L, I, AND R COMMANDS, THE LEADING BLANKS START IN COLUMN 3. FOR THE FB AND LB COMMANDS, LEADING BLANKS START IN COLUMN 4. TRAILING BLANKS ARE NOT SIGNIFICANT IN ANY COMMAND. THERE IS NO SIZE LIMIT ON THE INTEGER PARAMETERS, AND IF OMITTED, THE DEFAULT VALUE IS 1.

LINE LENGTH

IN NETED, TEXT LINES, COMMANDS, AND PATTERNS MAY BE 140 CHARACTERS IN LENGTH.

INPUT MODE

IN NETED'S INPUT MODE, EVERY LINE ENTERED IS TAKEN TO BE A NEW LINE OF TEXT TO BE ADDED TO THE FILE AT THE CURRENT POSITION. THE POINTER IS ALWAYS AT THE LAST LINE OF TEXT ENTERED. THE ONE EXCEPTION IS THAT A LINE OF TEXT WHICH CONSISTS OF JUST A PERIOD IN COLUMN 1 IS TAKEN AS THE COMMAND TO LEAVE INPUT MODE. IF YOU ENTER EDIT MODE COMMANDS WHILE IN INPUT MODE, THE COMMANDS ARE ACCEPTED AS TEXT.

IF YOU ENTER LINES IN EDIT MODE WITH THE I OR R COMMAND, THE FIRST TWO COLUMNS ARE TAKEN UP WITH THE COMMAND LETTER AND THE BLANK FOLLOWING. BECAUSE OF THE CONFUSION OF WHICH COLUMN YOU ARE IN, TABS WORK ONLY IN INPUT MODE, WHERE THE COLUMNS YOU TYPE IN CORRESPOND TO THE COLUMNS IN THE TEXT.

NOTE

IF A COMMAND SEEMS TO TAKE FOREVER TO GET EXECUTED, IT MAY BE THAT YOU ARE REALLY IN INPUT MODE. WHEN NETED ENTERS INPUT MODE IT TYPES 'INPUT' ON YOUR TERMINAL. IT SIGNIFIES EDIT MODE BY PRINTING 'EDIT'.

*** SUMMARY OF NETED EDIT MODE COMMANDS ***

THESE COMMANDS ARE EXPLAINED IN DETAIL IN THE FOLLOWING SECTIONS.

** COMMANDS THAT ONLY MOVE THE POINTER **

N X MOVES THE POINTER DOWN X LINES. IF X IS OMITTED, THE POINTER IS MOVED FORWARD ONE LINE. CURRENT LINE IS OPTIONALLY PRINTED. A NEGATIVE PARAMETER MOVES THE POINTER BACK TOWARD THE TOP.

P X PRINTS X LINES AT YOUR TERMINAL BEGINNING WITH AND FOLLOWING THE CURRENT LINE.

L <STRING> MOVES POINTER DOWN TO THE NEXT LINE CONTAINING <STRING>.
LB <STRING> MOVES POINTER BACK TO THE LAST LINE CONTAINING <STRING>.

F <STRING> MOVES POINTER DOWN TO NEXT LINE BEGINNING WITH <STRING>.
FB <STRING> MOVES POINTER BACK TO LAST LINE BEGINNING WITH <STRING>.

T MOVES THE POINTER TO THE <TOP OF FILE>

B MOVES THE POINTER TO THE LAST LINE OF THE FILE AND OPTIONALLY PRINTS IT.

<CR> ON THE 6600/6700, A LINE CONSISTING ONLY OF A CARRIAGE RETURN MOVES THE POINTER FORWARD ONE LINE AND PRINTS THE NEW LINE. SAME AS 'N 1'. (ON THE 6400, USE SPACE <CR>.)

** COMMANDS THAT ALTER LINES **

C /<STRING1>/<STRING2>/ X G
CHANGES <STRING1> TO <STRING2> IN THE NEXT X LINES (INCLUDING THE CURRENT LINE). IF THE OPTIONAL PARAMETER G IS INCLUDED, EVERY OCCURRENCE OF <STRING1> IS CHANGED TO <STRING2> IN ALL X LINES; IF THE G IS OMITTED, ONLY THE FIRST OCCURRENCE IN EACH LINE IS CHANGED.

THE INTEGER PARAMETER X IS OPTIONAL; IF OMITTED, ONLY THE CURRENT LINE IS AFFECTED. INSTEAD OF THE SLASH(/), ANY CHARACTER NOT OCCURRING IN EITHER STRING MAY BE USED EXCEPT A BLANK, CNTRL-X, CNTRL-U, CNTRL-M, OR DEL.

? BOTH THE C AND RC COMMANDS MAY BE PREFIXED WITH A '?'. NETED WILL THEN DISPLAY THE CHANGED LINE AND ASK FOR INSTRUCTIONS TO PROCEED. THE VALID RESPONSES ARE:
Y TO MAKE THE CHANGE
C TO MAKE THE CHANGE AND CONTINUE THE COMMAND WITHOUT QUESTION
N NO CHANGE BUT PROCEED WITH THE COMMAND
Q TO QUIT THE COMMAND NOW, WITHOUT CHANGE.

RC G REMEMBERS THE LAST /<STRING1>/<STRING2>/, AND REAPPLIES THE CHANGE TO THE CURRENT LINE. THE G IS OPTIONAL AS ABOVE.

I <STRING> INSERTS <STRING> INTO THE FILE AS A NEW LINE AFTER THE
CURRENT LINE, AND SETS THE POINTER TO THE INSERTED LINE.

D X DELETES X LINES STARTING WITH THE CURRENT LINE AND
THE FOLLOWING X-1 LINES. DEFAULT IS 1 LINE. THE POINTER
IS MOVED TO THE LINE IN FRONT OF THE FIRST LINE DELETED.

DTOP DELETES ALL LINES FROM THE TOP OF THE FILE DOWN TO THE
CURRENT LINE, BUT DOES NOT DELETE THE CURRENT LINE.
THE POINTER POSITION IS LEFT UNCHANGED.

R <STRING> REPLACES THE CURRENT LINE WITH <STRING>.
<STRING> BECOMES THE CURRENT LINE.

** FILE MANIPULATION COMMANDS **

W <FILE> WRITES THE WORKING COPY OF YOUR FILE OUT TO DISK AS THE
FILE NAMED <FILE>. IF <FILE> IS OMITTED, THE FILE USED
IS THE ONE NAMED WHEN YOU ENTERED NETED. THIS COMMAND
RETURNS TO NETED WITH THE WORKING COPY AND POINTER
POSITION UNDISTURBED.

WL X <FILE> WRITES THE NEXT X LINES OF THE EDITED FILE TO THE
FILE NAMED <FILE>. <FILE> MUST APPEAR, AND THE POSITION
OF THE POINTER IS NOT CHANGED.

WTOP <FILE> WRITES ALL LINES FROM THE TOP OF THE FILE DOWN TO THE
CURRENT LINE TO THE FILE NAMED <FILE>. THE CURRENT LINE
IS NOT INCLUDED, THE POINTER POSITION IS NOT CHANGED,
AND THE FILE CONTENTS ARE NOT ALTERED.

SAVE WRITES THE WORKING COPY OF YOUR FILE BACK OVER THE
ORIGINAL FILE, AND CAUSES YOUR JOB TO EXIT FROM NETED TO
INTERCOM. THE FILE WRITTEN IS REWOUND BOTH BEFORE AND
AFTER WRITING. SAVE, W, WL, AND WTOP WILL NOT OVERWRITE
ATTACHED PERMANENT FILES.

M <FILE> MERGES THE FILE NAMED <FILE> WITH THE FILE YOU ARE
EDITING, BEGINNING AT THE CURRENT POSITION OF THE
POINTER. AFTER THIS COMMAND, THE POINTER IS AT THE LAST
LINE OF THE FILE <FILE> THAT WAS MERGED.

** TOGGLE SWITCHES **

• THE PERIOD - PUTS YOU INTO INPUT MODE. IF YOU ARE IN INPUT MODE, IT TRANSFERS YOU BACK TO EDIT MODE. THE PERIOD MUST BE IN COLUMN ONE AND BE THE ONLY NON-BLANK CHARACTER IN THE LINE.

V TURNS OFF THE PRINTING OF OPTIONAL RESPONSES. SUBSEQUENT V COMMANDS REVERSE THE EFFECT EACH TIME.

• THE COMMAND '!' TURNS OFF THE SWITCH THAT CAUSES E> OR I> TO BE PRINTED AT YOUR TERMINAL AS A PROMPT SHOWING THAT NETED IS READY FOR INPUT. SUBSEQUENT '!' COMMANDS REVERSE THE EFFECT EACH TIME. *

NFPOS WHEN A STRING IS NOT FOUND, THE POINTER IS NOT MOVED. THE NFPOS COMMAND WILL CAUSE THE POINTER TO GO TO THE TOP OF THE FILE ON A NOT FOUND CONDITION. SUBSEQUENT 'NFPOS' COMMANDS REVERSE THE EFFECT EACH TIME. *

** COMMANDS THAT GIVE INFORMATION **

H -PR- PRINTS A LIST OF NETED COMMANDS.

HELP

LN PRINTS THE LINE NUMBER OF THE CURRENT POINTER POSITION.

** COMMANDS WHICH AFFECT THE TERMINAL **

STAR TABCH COL1,COL2,...

SETS A TAB CHARACTER FOR USE IN INPUT MODE. TABCH MAY BE ANY CHARACTER EXCEPT A, C, F, R, DEL, CTRL-Y, CTRL-H, CTRL-U, OR BLANK. COL1,COL2,... IS A LIST OF UP TO 10 TAB STOP COLUMNS. THE DEFAULT TAB CHARACTER IS 'J'; THE TAB STOP COLUMN IS 7. (COL1 MAY NOT BE 1.) *

** COMMANDS WHICH CAUSE YOU TO EXIT FROM NETED **

QUIT CAUSES IMMEDIATE EXIT FROM NETED TO INTERCOM. THE EDITED FILE IS NOT REWRITTEN.

SAVE (DESCRIBED ABOVE) ALSO CAUSES AN EXIT FROM NETED.

** COMMANDS THAT MOVE THE POINTER **

THE N OR NEXT COMMAND

N X

THIS COMMAND CAUSES THE POINTER TO BE MOVED DOWN X LINES. THUS, IF YOU WANTED TO SKIP AHEAD 10 LINES, YOU WOULD ENTER

N 10

THE LINE WHERE THE POINTER NOW RESTS IS OPTIONALLY PRINTED AT YOUR TERMINAL.

THE N COMMAND ALSO ALLOWS YOU TO BACK UP IN THE FILE BY MOVING THE POINTER UP X LINES BY PUTTING A MINUS SIGN IN FRONT OF THE X. THUS,

N-6

BACKSPACES YOU 6 LINES IN THE FILE.

THE COMMAND N WITH NO PARAMETERS ADVANCES THE POINTER ONE LINE. IF, IN ADVANCING, THE END OF THE FILE IS REACHED, THE MESSAGE

<BOTTOM OF FILE>

IS PRINTED AT YOUR TERMINAL, AND THE POINTER IS LEFT AFTER THE LAST LINE OF THE FILE. IF YOU ARE MOVING UP IN THE FILE BY USING A NEGATIVE PARAMETER AND REACH THE TOP OF THE FILE, NETED RESPONDS

<TOP OF FILE>

AND THE POINTER IS AT THAT POSITION.

ON THE 6600/6700, THE CARRIAGE RETURN COMMAND (ENTERING A LINE CONSISTING ONLY OF A CARRIAGE RETURN) WILL MOVE THE POINTER AHEAD ONE LINE AND ALWAYS PRINT THE LINE. ON THE 6400, USE SPACE CARRIAGE RETURN.

THE L OR LOCATE COMMAND AND
THE LB OR LOCATE BACKWARD COMMANDL <STRING>
LB <STRING>

THE L COMMAND MOVES THE POINTER TO THE NEXT LINE CONTAINING THE CHARACTER STRING <STRING>. <STRING> MAY CONTAIN LEADING AND INTERNAL BLANKS, AND THESE BLANKS WILL BE SIGNIFICANT. (THEREFORE, THE COMMAND 'L A B' WILL NOT LOCATE THE CHARACTER STRING 'AB'.) IT IS SIGNIFICANT THAT TRAILING BLANKS ARE NOT SIGNIFICANT. THUS THE COMMAND 'L A ' MIGHT BE USED WITH THE HOPE OF LOCATING THE WORD 'A'; HOWEVER, IT WOULD TURN UP WORDS OR CHARACTER STRINGS BEGINNING WITH THE LETTER 'A' AS WELL.

SEARCHING BEGINS WITH THE LINE AFTER THE CURRENT ONE AND PROCEEDS UNTIL EITHER A MATCH IS FOUND OR THE END OF THE FILE IS REACHED. IF A MATCH IS FOUND, THE POINTER IS SET ON THE LINE WITH THE MATCHING CHARACTER STRING, AND THE LINE IS OPTIONALLY PRINTED AT YOUR TERMINAL. IF THE END OF THE FILE IS ENCOUNTERED BEFORE A SUCCESSFUL MATCH, THE POINTER IS NOT MOVED AND NETED RESPONDS

NOT FOUND.

IF THE PARAMETER <STRING> IS MISSING OR ALL BLANK, L REMEMBERS THE LAST STRING LOOKED FOR, AND USES IT.

LB IS THE SAME AS L BUT SEARCH STARTS WITH THE LINE BEFORE THE CURRENT LINE AND PROCEEDS TOWARD THE TOP OF THE FILE.

THE F OR FIND COMMAND AND
THE FB OR FIND BACKWARD COMMAND

F <STRING>
FB <STRING>

THE F COMMAND MOVES THE POINTER TO THE NEXT LINE IN THE FILE THAT BEGINS WITH <STRING>. THIS LINE IS OPTIONALLY PRINTED. LEADING BLANKS ARE SIGNIFICANT BOTH IN THE STRING GIVEN IN THE COMMAND AND IN THE LINES SEARCHED. THUS, THE COMMAND 'F DO 5 I=1,20' WOULD NOT LOCATE ANYTHING (UNLESS, FOR SOME REASON YOU HAD A '00' STATEMENT THAT BEGAN IN COLUMN ONE). THE F COMMAND WORKS JUST LIKE THE L COMMAND EXCEPT THAT IT ONLY FINDS LINES THAT BEGIN (IN COLUMN ONE) WITH THE GIVEN CHARACTER STRING.

FB IS THE SAME AS F BUT SEARCHES BACKWARDS FROM THE LINE BEFORE THE CURRENT LINE TOWARD THE TOP OF THE FILE.

THE P OR PRINT COMMAND

P X

THIS COMMAND CAUSES THE X LINES INCLUDING AND SUCCEEDING THE CURRENT LINE TO BE PRINTED AT YOUR TERMINAL. THUS,

P 10

PRINTS THE CURRENT LINE AND THE 9 SUCCEEDING LINES. THE POINTER IS MOVED TO THE LAST LINE PRINTED.

THE COMMAND

P

(WITH NO PARAMETER) PRINTS THE CURRENT LINE. THE LINES <TOP OF FILE> AND <BOTTOM OF FILE> ARE PRINTED TO INDICATE THOSE POSITIONS.

IF THE PARAMETER 'X' IS PRECEDED BY A MINUS SIGN, THE POINTER WILL NOT BE MOVED BUT 'X' LINES FORWARD WILL BE PRINTED. FOR EXAMPLE, 'P-S' WILL PRINT THE CURRENT LINE THROUGH THE BOTTOM, BUT WILL LEAVE THE POINTER AT THE CURRENT LINE.

IF THE END OF FILE IS ENCOUNTERED WHILE TRYING TO EXHAUST THE LINE COUNT, THE POINTER WILL MOVE TO THE BOTTOM OF THE FILE AND NETED WILL RESPOND

<BOTTOM OF FILE>

NOTE - THE TOGGLE COMMAND V DOES NOT AFFECT PRINTING RESULTING FROM THE P COMMAND.

THE T OR TOP COMMAND

T

THE T COMMAND MOVES THE POINTER TO THE TOP OF THE FILE. THE POINTER WILL BE POSITIONED SO THAT THE NEXT LINE IS THE FIRST LINE OF YOUR FILE, AND NETED WILL RESPOND

<TOP OF FILE>

WHEN YOU ENTER NETED IN EDIT MODE, YOU ARE AUTOMATICALLY POSITIONED AT THE TOP OF THE FILE.

THE B OR BOTTOM COMMAND

B

THE B COMMAND MOVES THE POINTER TO THE LINE JUST BEFORE THE <BOTTOM OF FILE> POSITION AND OPTIONALLY PRINTS THE LINE. THIS LINE WILL BE THE LAST LINE OF YOUR FILE. IN SOME CASES THIS LINE WILL BE 'EOR' OR 'EOF'. THESE INDICATE END OF LOGICAL RECORD AND END OF LOGICAL FILE, RESPECTIVELY.

SINCE A TRAILING EOR OR EOF IS OFTEN APPENDED TO A FILE AUTOMATICALLY, AND IS NOT REALLY WANTED, NETED WILL AUTOMATICALLY REMOVE ONE TRAILING EOR, ONE TRAILING EOF, OR A TRAILING EOR EOF PAIR. IF MORE RECORD MARKS EXIST AT THE BOTTOM, THEY ARE LEFT THERE.

CERL NETED DIFFERS FROM THE SPECIFICATIONS FOR ARPANET EDITORS IN THE IMPLEMENTATION OF THE B COMMAND. AT OTHER SITES, THE B COMMAND PUTS THE POINTER AT THE <BOTTOM OF FILE> POSITION AND PUTS YOU IN INPUT MODE. THIS WAS CONSIDERED DANGEROUS SINCE AT BKY THE LAST LINE OF THE FILE MAY BE A RECORD MARK (EOR), IN WHICH CASE LINES INPUT AFTER THE B COMMAND WOULD BE SEPARATED FROM THE REST OF THE FILE BY THE RECORD MARK. IF THE FILE BEING EDITED WERE A FORTRAN SOURCE PROGRAM, FOR EXAMPLE, LINES APPENDED AFTER AN EOR WOULD NOT BE ENCOUNTERED BY THE COMPILER - A LIKELY SOURCE OF CONSTERNATION.

THE <CR> OR CARRIAGE RETURN COMMAND

ON THE 6600/6700, ENTERING A LINE CONSISTING ONLY OF BLANKS OR A CARRIAGE RETURN CAUSES NETED TO MOVE THE POINTER FORWARD ONE LINE AND PRINT IT. ON THE 6400, AT LEAST ONE BLANK IS REQUIRED WITH THE CARRIAGE RETURN.

** COMMANDS THAT ALTER LINES **

THE C OR CHANGE COMMAND AND
THE RC OR REPEAT CHANGE COMMAND

THIS COMMAND TAKES TWO CHARACTER STRINGS AS PARAMETERS; IT SEARCHES FOR THE FIRST STRING AND, ON FINDING IT, SUBSTITUTES THE SECOND STRING FOR IT. THE RANGE OF THE SEARCH FOR THE FIRST STRING IS SPECIFIED BY TWO OPTIONAL PARAMETERS THAT GO AT THE END OF THE COMMAND - THE LETTER 'G' AND AN INTEGER.

THE INTEGER IS THE NUMBER OF LINES TO BE SEARCHED (AS IN OTHER NETED COMMANDS). THE 'G', IF PRESENT, MEANS CHANGE ALL OCCURRENCES OF THE FIRST STRING IN EACH OF THE LINES; IF ABSENT, ONLY THE FIRST (LEFTMOST) OCCURRENCE OF THE STRING IN EACH LINE IS CHANGED.

A CHARACTER NOT PRESENT IN EITHER STRING IS USED TO INDICATE THE BEGINNING AND END OF THE TWO STRINGS. THE C COMMAND HAS, THEREFORE, THE FORM -

C /<STRING1>/<STRING2>/ X G

/ (SLASH) STRING DELIMITER. THE SLASH IS USED IN THE EXAMPLE, BUT ANY CHARACTER (EXCEPT A BLANK, ETC.) NOT OCCURRING IN EITHER <STRING1> OR <STRING2> MAY BE USED INSTEAD.

<STRING1> THE CHARACTER STRING THAT IS TO BE REPLACED. ALL BLANKS IN THIS STRING ARE SIGNIFICANT. IF THIS STRING IS NULL (ADJACENT DELIMITERS), <STRING2> WILL BE INSERTED AT THE BEGINNING OF THE LINE.

<STRING2> THE CHARACTER STRING THAT IS TO REPLACE <STRING1>. ALL BLANKS IN THIS STRING ARE SIGNIFICANT. THIS STRING MAY BE NULL, IN WHICH CASE <STRING1> IS SIMPLY DELETED.

X THIS IS AN OPTIONAL INTEGER PARAMETER (NO SIZE LIMIT) SPECIFYING THE NUMBER OF LINES ON WHICH THE COMMAND IS TO OPERATE. THE C COMMAND WILL AFFECT THE CURRENT LINE AND THE NEXT X-1 LINES. IF OMITTED, ONLY THE CURRENT LINE IS AFFECTED.
IF X IS USED, THE POINTER WILL MOVE DOWN X-1 LINES OR TO THE <BOTTOM OF FILE> POSITION - WHICHEVER IS FIRST. IF <BOTTOM OF FILE> IS REACHED, NETED WILL RESPOND <BOTTOM OF FILE>. IF NOT, NETED WILL NOT INDICATE THE CURRENT POSITION OF THE POINTER (USE THE P COMMAND TO SEE WHERE YOU ARE).

G FOR GLOBAL. IF THE G IS PRESENT, THE C COMMAND WILL CHANGE ALL OCCURRENCES OF <STRING1> TO <STRING2> IN ALL LINES AFFECTED. IF THE G IS NOT USED, ONLY THE FIRST OCCURRENCE OF <STRING1> IN EACH LINE IS CHANGED.

IF <STRING1> IS NOT FOUND WITHIN THE RANGE OF LINES SPECIFIED BY X, NETED RESPONDS

NOTHING CHANGED.

THE C COMMAND WILL PRINT AT YOUR TERMINAL EACH LINE CHANGED (AN OPTIONAL RESPONSE - CONTROLLED BY THE V COMMAND). YOU CAN USE THIS FEATURE TO PRINT ALL THE LINES CONTAINING SOME INTERESTING CHARACTER STRING LIKE THIS

C /STOP/STOP/ S

(THOUGH THE LINES CONTAINING 'STOP' ARE NOT MADE DIFFERENT, THE C COMMAND THINKS IT CHANGED THEM, SO IT PRINTS THEM.)

ALSO, THE STRING DELIMITER FEATURE MAKES TRAILING BLANKS WITHIN THE LINES (NOT THE COMMAND) SIGNIFICANT. AS MENTIONED ABOVE, THE L COMMAND WOULD NOT BE ABLE TO DISTINGUISH BETWEEN THE LETTER 'A' AT THE START OF A WORD AND THE WORD 'A'. YOU COULD USE THE C COMMAND TO LOCATE THE LINES WITH THE WORD 'A' IN THEM LIKE THIS -

C X A X A X 140

WITH OPTIONAL RESPONSE PRINTING TURNED ON, THIS COMMAND WOULD LIST ALL THE LINES AMONGST THE CURRENT AND NEXT 139 THAT CONTAIN THE WORD 'A'. IT WOULD NOT, HOWEVER, MOVE THE POINTER TO SUCH A LINE. THE POINTER WOULD BE MOVED TO THE 'BOTTOM OF FILE' OR TO THE 139TH LINE AFTER THE CURRENT ONE. EACH LINE CONTAINING 'A' WOULD BE PRINTED, THOUGH, AND YOU COULD THEN USE THE T AND L COMMANDS TO MOVE THE POINTER TO ONE OF THE LINES LISTED.

COMMAND FORMAT. THE INTEGER PARAMETER X AND THE G PARAMETER MAY BE SEPARATED FROM THE FINAL STRING DELIMITER AND EACH OTHER BY ANY NUMBER OF BLANKS. EITHER OR BOTH MAY BE OMITTED. THE ORDER OF THESE OPTIONAL PARAMETERS IS IMMATERIAL AS LONG AS THEY ARE AFTER THE LAST STRING DELIMITER. BLANKS ARE IGNORED EXCEPT FOR THE POSSIBLY NEEDED BLANK IN COLUMN TWO (AFTER THE 'C'), AND WITHIN THE TWO STRINGS. AFTER THE THIRD OCCURRENCE OF THE DELIMITER CHARACTER IT IS NO LONGER CONSIDERED SPECIAL - HENCE, THE LETTER G AND DIGITS MAY BE USED AS DELIMITERS.

BEGINNING OF LINE. TO INSERT CHARACTERS AT THE BEGINNING OF THE LINE, <STRING1> SHOULD BE EMPTY: C //<NEW-STUFF>/ .

END OF LINE. TO ENABLE THE CHANGE COMMAND TO OPERATE ON A CHARACTER STRING ONLY WHEN THAT STRING OCCURS AT THE END OF THE LINE, THE C COMMAND WILL 'FIND' AS MANY BLANKS AT THE END OF THE LINE AS IT NEEDS TO IN ORDER TO GET A MATCH. SUPPOSE YOU WANTED TO PUT A PERIOD INSTEAD OF THE COMMA AT THE END OF THIS LINE -

COPYSF,A,CUT,EOI,LR,

THE C COMMAND WOULD BE A PAIN IN THE NECK IF YOU COULDN'T DISTINGUISH THE END OF THE LINE. THE COMMAND-

C / , / . /

WILL CHANGE ONLY THE COMMA AT THE END. IT DOES THIS BY LOCATING TRAILING BLANKS IN THE LINE EVEN THOUGH THERE ARE NONE.

IN ADDITION, NETED ALWAYS FINDS A TRAILING BLANK AT THE END OF EVERY LINE. THUS IF YOU CHANGE BLANKS TO S'S IN THE ABOVE LINE, YOU GET

COPYSF,A,OUT,EOI,LR,

C/ /S/G

COPYSF,A,OUT,EOI,LR,S

EVEN THOUGH THERE WAS NOT REALLY A BLANK AT THE END OF THAT LINE.

DELETE ENTIRE LINE. IF YOU USE THE CHANGE COMMAND TO DELETE AN ENTIRE LINE -

C /EOP//10000

THE LINES ARE NOT REALLY ELIMINATED (AS THEY ARE BY THE D COMMAND), BUT REPLACED BY LINES CONSISTING OF TWO BLANKS.

EXAMPLES OF THE C COMMAND

C /BAD/GOOD/	-CHANGE FIRST OCCURRENCE OF CHARACTER STRING 'BAD' TO 'GOOD'
C 1213116	-CHANGE ALL 2'S TO 3'S IN CURRENT LINE
C ** *10	-INSERT 6 BLANKS AT THE BEGINNING OF NEXT 10 LINES
C 'COMMON'COMMON'S	-WILL PRINT (FIRST LINE) OF EACH 'COMMON' STATEMENT FROM THE CURRENT POSITION TO THE BOTTOM
C /Z /X/99999 4	-CHANGES Z'S TO X'S WHEN THEY OCCUR AT THE END OF LINES (OR FOLLOWED BY MANY BLANKS)
C NO KNOWING	-CHANGE ALL D K'S TO OWI'S
C .THIS.THAT.	-CHANGE THIS TO THAT
C *USELESS STUFF**	-GET RID OF 'USELESS STUFF'
C \$FROGS\$PRINCES	-IT'S A POWERFUL EDITOR

IN SOME CIRCUMSTANCES, YOU MAY USE THE C COMMAND TO SAVE REPEATED TYPING OF COMPLICATED OR LONG STRINGS. TO GIVE AN EXAMPLE, SUPPOSE YOU HAD A LOT OF FORMAT STATEMENTS THAT ONLY HAD MINOR VARIATIONS.

100 FORMAT(1X,*NOW IS THE TIME FOR*,F5.0,*TO COME TO THE AID*)
101 FORMAT(1X,*NOW IS THE TIME FOR*,I5,*TO COME TO THE AID*)
ETC,ETC

YOU COULD JUST ENTER (IN INPUT MODE) -

100SF5.0^
101SI5^

ETC., ETC.

THEN DO -

```
T
C /S/  FORMAT(1X,*NOW IS THE TIME FOR*/$G
```

AND -

```
T
C /^/,*TO COME TO THE AID*)/$ G
```

THE PC COMMAND ALLOWS YOU TO REAPPLY THE LAST CHANGE STRINGS TO THE SAME OR DIFFERENT LINES. PC WILL ONLY WORK ON THE CURRENT LINE. G IS OPTIONAL AND HAS THE SAME MEANING AS FOR 'C'.

BOTH THE C AND PC COMMANDS MAY BE PREFACED BY A ?. WHEN THE ? IS USED NETED WILL PRINT THE CHANGED LINE ON THE TERMINAL AND THEN PROMPT WITH A ?). THE VALID RESPONSES ARE

```
Y - DO THE CHANGE
C - DO THE CHANGE, CONTINUE THE COMMAND WITHOUT QUESTIONING
N - DO NOT CHANGE, BUT CONTINUE THE COMMAND
Q - ABORT THE COMMAND
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THE I OR INSERT COMMAND

```
I <STRING>
```

THE I COMMAND INSERTS <STRING> INTO THE FILE AS A NEW LINE AFTER THE CURRENT LINE. THE LINE INSERTED (I.E., <STRING>) BECOMES THE CURRENT LINE. THIS COMMAND GENERATES NO PRINTED RESPONSE.

THE CONTENTS OF COLUMN THREE ON YOUR TELETYPE LINE BECOME THE CONTENTS OF COLUMN ONE OF THE LINE IN THE FILE - I.E., LEADING BLANKS ARE SIGNIFICANT AND THE BLANK AFTER THE COMMAND LETTER IS NOT PART OF <STRING>. INTERNAL BLANKS ARE SIGNIFICANT IN <STRING>. TABS DO NOT WORK IN THE STRING.

THE D OR DELETE COMMAND

```
D X
```

THE D COMMAND DELETES THE CURRENT LINE AND X-1 LINES BELOW IT. IF X IS OMITTED, ONLY THE CURRENT LINE IS DELETED. THE POINTER IS MOVED TO THE LINE THAT WAS JUST ABOVE THE LINE THAT WAS CURRENT WHEN THE D COMMAND WAS ISSUED. IF THE END OF FILE IS ENCOUNTERED, NETED RESPONDS

DELETED TO BOTTOM

IN THIS CASE, THE POINTER IS SET AT THE <BOTTOM OF FILE> POSITION, BUT IN ALL OTHER CASES THE POINTER IS JUST MOVED UP ONE LINE. IF THE PARAMETER X IS 0 (ZERO), 1, OR OMITTED, THE COMMAND DELETES ONLY THE CURRENT LINE; IF IT IS NEGATIVE, THE ERROR MESSAGE 'ILLEGAL ARGUMENT' IS ISSUED.

THE DTOP OR DELETE-TO-POINTER COMMAND

DTOP

THIS COMMAND (WHICH TAKES NO PARAMETER) DELETES LINES FROM THE FILE BEGINNING AT THE TOP AND STOPPING AT THE LINE BEFORE THE CURRENT LINE. THE CURRENT LINE IS NOT AFFECTED, NOR IS THE POINTER MOVED. THE LINE THAT IS CURRENT WHEN THE COMMAND 'DTOP' IS ISSUED IS THE FIRST LINE IN THE FILE AFTER THE COMMAND HAS BEEN EXECUTED.

THE R OR REPLACE COMMAND

R <STRING>

THE R COMMAND REPLACES THE CURRENT LINE WITH <STRING>. THE POINTER DOES NOT MOVE - IT POINTS TO THE NEW LINE <STRING>. THIS COMMAND GENERATES NO PRINTED RESPONSE. IT WORKS LIKE A D FOLLOWED BY AN I. BLANKS ARE TREATED AS IN THE I COMMAND.

** TOGGLE COMMANDS AND COMMANDS THAT GIVE INFORMATION **

THE CHANGE MODE COMMAND - THE PERIOD

ENTERING A LINE CONSISTING OF JUST A PERIOD CAUSES YOU TO LEAVE EDIT MODE AND ENTER INPUT MODE. THE POINTER IS LEFT WHERE IT WAS. UPON EXECUTION OF THE COMMAND, NETED REPLIES

INPUT.

NOTE THAT THE SAME COMMAND IS USED TO LEAVE INPUT MODE AND GO INTO EDIT MODE. (THIS IS THE ONLY COMMAND THAT NETED WILL ACCEPT WHEN IN INPUT MODE.) NOTE TOO THAT THE CHANGE MODE COMMAND ENTERED FROM EITHER MODE MUST BE A LINE CONSISTING OF SOLELY A PERIOD, THOUGH TRAILING BLANKS WILL BE IGNORED, AS IN ALL COMMANDS. (TO INPUT A LINE CONSISTING OF JUST A PERIOD, YOU MUST USE THE I OR R COMMAND).

THE V OR VERIFY COMMAND

V

THE V COMMAND, WHICH TAKES NO PARAMETERS, ACTS AS A TOGGLE SWITCH ALTERNATELY TO ALLOW AND PREVENT THE PRINTING OF NETED RESPONSES TO OTHER COMMANDS (SPECIFICALLY, THE C, RC, L, F, LB, FB, AND N COMMANDS). THE DEFAULT POSITION IS ON - ALLOWING PRINT. BY ENTERING THE V COMMAND, YOU PREVENT PRINTING AT YOUR TERMINAL OF THE LINES REACHED (OR AFFECTED) BY OTHER COMMANDS. BY ENTERING V AGAIN, YOU TURN PRINTING BACK ON, AND SO ON, BACK AND FORTH.

THE ASTERISK COMMAND - *

THE COMMAND '*' (AS THE ONLY CHARACTER OF THE LINE) REVERSES THE INTERNAL 'SWITCH' GOVERNING THE PRINTING OF E> AND I> AS A PROMPT WHEN NETED IS READY FOR A NEW COMMAND OR LINE OF INPUT.

THE NFPOS OR NOT-FOUND POSITIONING COMMAND

NFPOS

THE NFPOS TOGGLE CONTROLS THE POSITION OF THE POINTER AFTER A 'NOT FOUND' CONDITION ON AN L, LB, F OR FB COMMAND. THE DEFAULT POSITION DOES NOT MOVE THE POINTER WHEN THE SEARCH STRING IS NOT FOUND. ENTERING NFPOS WILL CAUSE THE POINTER TO GO TO THE TOP OF THE FILE WHENEVER THE STRING SEARCHED FOR IS NOT FOUND, ETC.

THE H OR HELP COMMAND

H
HELP

THE H OR HELP COMMAND CAUSES NETED TO PRINT A LIST OF AVAILABLE COMMANDS WITH A SHORT DESCRIPTION OF EACH.

THE LN OR LINE NUMBER COMMAND

LN

THE LN COMMAND PRINTS THE LINE NUMBER OF THE CURRENT LINE. IT ACTUALLY COUNTS LINES FROM THE TOP WHEN IT IS EXECUTED, SO IT MAY USE A BIT OF TIME WHEN EXECUTED FAR INTO A LONG FILE.

** COMMANDS WHICH AFFECT THE TERMINAL **

THE STAB OR SET TAB STOP COMMAND

STAB TABCH COL1,COL2,...,COLN

THE STAB COMMAND SETS A CHARACTER TO BE USED TO INDICATE A TAB OPERATION, AND THE LIST OF TAB STOPS. TABCH MAY BE ANY CHARACTER OTHER THAN BLANK, <CR>, CTRL-X, CTRL-U, CTRL-H, AND DEL. FULL ASCII CHARACTERS MAY BE USED TO INDICATE A TAB, EVEN IF THE FILE IS IN DISPLAY CODE. THERE MAY BE FROM 0 TO 10 TAB STOPS, IN INCREASING ORDER. COL1 MAY NOT BE 1.

** FILE MANIPULATION COMMANDS **

WHEN NETED WRITES A FILE (SAVE, W, WTOP, WL), LINES CONSISTING SOLELY OF 'EOR' OR 'EOF' (IN COLUMNS 1-3) ARE CHANGED INTO END-OF-RECORD AND END-OF-FILE MARKS, RESPECTIVELY. AN END-OF-RECORD IS WRITTEN AFTER THE LAST LINE. THE FILE BEING WRITTEN IS REWOUND BEFORE AND AFTER WRITING, THUS REPLACING ANY PREVIOUS CONTENTS. ATTACHED PERMANENT FILES ARE NEVER OVERWRITTEN.

THE SAVE COMMAND

SAVE
SAVE <FILENAME>

THIS COMMAND WRITES THE WORKING COPY TO THE SPECIFIED FILE. IF <FILENAME> IS OMITTED, THE FILENAME SPECIFIED WHEN ENTERING NETED IS USED, THUS REPLACING THE ORIGINAL CONTENTS.

NETED PRINTS THE MESSAGE-

<FILENAME> WRITTEN.

AND REWINDS THE FILE BEFORE STOPPING.

THE SAVE COMMAND IS INTENDED TO BE USED WHEN YOU ARE FINISHED EDITING THE FILE AND NOW WISH TO DO SOMETHING ELSE - PERHAPS USE OR PERMANENTLY STORE THE FILE. IT IS CUMBROUS AND UNECONOMICAL TO USE THIS WHEN ALL YOU WANT TO DO IS SAVE ON DISK A COPY OF YOUR EDITING TO THAT POINT AND THEN GO ON EDITING. FOR THAT VERY VALID PURPOSE, USE THE W COMMAND.

THE W OR WRITE FILE COMMAND

W
W <FILENAME>

THIS COMMAND CAUSES NETED TO WRITE THE ENTIRE WORKING COPY YOU ARE EDITING TO THE DISK FILE WHOSE NAME IS THE PARAMETER TO THE COMMAND. IF NO PARAMETER IS GIVEN, THE ORIGINAL FILE NAME IS USED (THE FILE NAMED WHEN ENTERING NETED).

THE FILE THUS WRITTEN TO IS REWOUND FIRST, SO ANY PREVIOUS CONTENTS OF THAT FILE ARE REPLACED. IT IS ALSO REWOUND AFTER. IF THE FILE NAMED IN THE COMMAND IS NOT ONE OF THE FILES CONNECTED TO YOUR JOB, A FILE OF THAT NAME WILL BE CREATED (*PF).

AFTER THIS COMMAND HAS BEEN EXECUTED, YOUR JOB RETURNS TO NETED WITH THE POINTER WHERE IT WAS WHEN YOU GAVE THE COMMAND. NETED WILL RESPOND

<FILENAME> WRITTEN.

USING A NEW FILE NAME IN THE W COMMAND LETS YOU PRESERVE THE ORIGINAL FILE (WITH NO EDITING CHANGES) AS WELL AS THE VERSION EDITED

TO THAT POINT. MOST OF US MAKE MISTAKES NOW AND THEN USING INTERACTIVE EDITORS. IF YOU ARE ONE OF THE CROWD, FREQUENTLY WRITING YOUR EDITED FILE TO A SCRATCH FILE WITH THE W COMMAND MAY SAVE SOME OF THE GRIEF THAT COMES FROM KNOWING YOU WRECKED IT ALL YOURSELF. SUCH SCRATCH FILES ARE, HOWEVER, NOT PROTECTED FROM SYSTEM FAILURES.

THE WTOP OR WRITE-TO-POINTER COMMAND

WTOP <FILENAME>

THIS COMMAND CAUSES NETED TO WRITE THE LINES FROM THE TOP OF THE FILE DOWN TO BUT NOT INCLUDING THE CURRENT LINE TO THE DISK FILE NAMED AS THE PARAMETER OF THE COMMAND. THE POINTER POSITION IS NOT CHANGED; THE CONTENTS OF THE WORKING COPY BEING EDITED ARE NOT ALTERED. THERE IS NO DEFAULT FILE FOR THE WTOP COMMAND TO WRITE UPON, SO A FILE NAME MUST BE GIVEN AS A PARAMETER.

WHEN NETED HAS EXECUTED THIS COMMAND, IT RESPONDS -

<FILENAME> WRITTEN.

THE WL OR WRITE LINES COMMAND

WL X <FILENAME>

THIS COMMAND CAUSES NETED TO WRITE X LINES FROM AND INCLUDING THE CURRENT LINE TO THE NAMED FILE. IF X IS ABSENT, ONE LINE IS WRITTEN. AS IN WTOP, THE FILENAME MUST BE SPECIFIED. THIS COMMAND IS USEFUL IN COPYING OR MOVING LINES AROUND IN THE FILE. TO COPY 5 LINES TO ANOTHER SPOT IN THE FILE, YOU COULD ENTER:

F <FIRST LINE TO BE COPIED>
WL 5 TEMP
L <LOCATION AFTER WHICH LINES ARE TO BE INSERTED>
M TEMP

IF MOVING (RE-ARRANGING) LINES, BE SURE TO DELETE THEM FROM THEIR ORIGINAL LOCATION AFTERWARDS.

THE M OR MERGE COMMAND

M <FILENAME>

THIS COMMAND CAUSES A COPY OF THE CONTENTS OF THE ALREADY EXISTING FILE NAMED <FILENAME> TO BE INSERTED INTO THE WORKING FILE, BEGINNING IMMEDIATELY AFTER THE CURRENT POINTER POSITION. THE FILE IS REWOUND BEFORE MERGING. THE POINTER WILL BE MOVED TO THE FINAL LINE OF THE INSERTED MATERIAL. UPON EXECUTING THIS COMMAND, NETED RESPONDS '<FILENAME> MERGED.' IF YOU GIVE AN ILLEGAL FILE NAME, NETED RESPONDS 'ILLEGAL FILE NAME.' IF THE FILE IS NOT A DISK FILE OR IF NETED CAN TELL THAT IT IS NOT A TEXT FILE, IT WILL RESPOND 'ILLEGAL FILE TYPE.'

IF YOU GET AN ERROR MESSAGE AFTER A MERGE COMMAND AND CANNOT SEE WHY THE FILE YOU SPECIFY CANNOT BE MERGED, IT IS POSSIBLE THAT THE FILE SPECIFIED IS NOT CONNECTED TO YOUR JOB (PERHAPS YOU MISREMEMBERED OR MISTYPED THE NAME). IN SUCH A CASE, THE BEST NEXT STEP IS TO DO 'SAVE' AND THEN EXECUTE THE CONTROL CARD 'FILES'. THIS WILL PRINT AT YOUR TERMINAL A LIST OF THE FILES CONNECTED TO YOUR JOB SO YOU CAN SEE WHAT FILES YOU REALLY HAVE. THE FILE TO BE MERGED MUST BE A NON-EMPTY DISK FILE ATTACHED TO YOUR JOB.

NOTE - THERE WILL PROBABLY BE AT LEAST A RECORD MARK (SHOWN AS CHARACTER STRING 'EOR') AT THE END OF THE FILE YOU MERGE. IN MOST CASES YOU WILL NOT WANT THIS RECORD MARK (OR FILE MARK IF IT IS THERE). THEREFORE, NETED WILL DELETE A SINGLE TRAILING EOR, A SINGLE TRAILING EOR, OR A TRAILING EOR EOR PAIR. IF YOU REALLY WANT A RECORD MARK YOU MUST EITHER INSERT IT OR HAVE EXTRA MARKS AT THE END OF THE MERGE FILE. EVEN SO, WE STRONGLY RECOMMEND THAT YOU USE THE 'P' COMMAND RIGHT AFTER ANY 'M' COMMAND TO SEE WHAT THE LAST LINE MERGED ACTUALLY WAS. IF YOU FIND A RECORD MARK AND DELETE IT, USE THE 'P' AGAIN TO SEE IF THERE ARE YET MORE MARKS BEHIND THAT ONE.

/ ** COMMANDS THAT TAKE YOU OUT OF NETED **

THE QUIT COMMAND

QUIT

THE QUIT COMMAND CAUSES IMMEDIATE EXIT FROM NETED - NO WRITING OUT OF FILES OCCURS AS A RESULT OF THIS COMMAND, ALTHOUGH STUFF PREVIOUSLY WRITTEN OUT TO DISK WITH THE W OR SAVE COMMANDS IS NOT AFFECTED.

IF, FOR EXAMPLE, YOU WISH TO ALTER A GIVEN FILE BUT PRESERVE A COPY OF THE ORIGINAL INTACT, YOU WOULD EDIT IT, WRITE THE NEW VERSION OUT UNDER ANOTHER NAME, THEN QUIT. TO CHANGE THE ORIGINAL, ON THE OTHER HAND, YOU WOULD EXIT EITHER BY SAVE OR BY THE SEQUENCE W FOLLOWED BY QUIT.

NOTE - THE REQUIREMENT THAT SAVE AND QUIT BE FULLY SPELLED OUT IS BASED ON A CONCERN THAT THESE TWO PARTICULARLY POWERFUL FUNCTIONS NOT BE INVOKED BY THE ACCIDENTAL MISTYPING OF A SINGLE LETTER.

THE SAVE COMMAND AGAIN

SAVE

THE SAVE COMMAND WAS DESCRIBED IN THE PRECEDING SECTION. IT REWRITES THE ORIGINAL FILE WITH THE CURRENT CONTENTS OF THE WORKING COPY YOU WERE EDITING. YOU THEN EXIT FROM NETED AS YOU DO WITH THE QUIT COMMAND.

** NETEDF/NETEDR VS NETED **

NETEDF/NETEDR DIFFER FROM NETED IN THE FOLLOWING AREAS:

- 1) ASCII MODE IS INDICATED BY THE PRESENCE OF ANY SECOND PARAMETER ON THE 'NETEDF' OR 'NETEDR' STATEMENT, NOT JUST 'CH=AS'. THUS, 'NETEDF,LFN,ASCII' OR 'NETEDR,LFN,A' OR WHATEVER, MAY BE USED.
- 2) THE 'PROMPT' MODE HAS BEEN REMOVED. THERE IS NO '*' COMMAND AND NO 'E>' OR 'I>' PROMPTERS.
- 3) THE 'STAB' COMMAND HAS BEEN EXPANDED:

THE STAB OR SET TAB STOP COMMAND

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STAB TABCH COL1,COL2,...,COLN
STAB TABCH
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THE STAB COMMAND SETS A CHARACTER TO BE USED TO INDICATE A TAB OPERATION, AND THE LIST OF TAB STOPS. TABCH MAY BE ANY CHARACTER OTHER THAN BLANK, CR, CTRL-X, CTRL-U, CTRL-M, DEL OR UPPER-CASE A, C, F, R. FULL ASCII CHARACTERS MAY BE USED TO INDICATE A TAB EVEN IF THE FILE IS IN DISPLAY CODE. THERE ARE ALWAYS 30 TAB STOPS, IN INCREASING ORDER.

CERTAIN UPPER-CASE LETTERS IN THE TABCH POSITION ARE INTERPRETED AS SHORTHAND FOR PRE-DEFINED TAB SETTINGS AND MAY NOT, THEREFORE, BE USED AS THE TAB CHARACTER:

A (ASSEMBLY)	-	11,18,21,24,27,30,33,36,39,42, 45,48,51,54,57,60,63,66,69,72, 75,78,81,84,87,90,93,96,99,102	
C (COBOL)	-	8,12,16, 20, 24, 28, 32, 36, 40, 44, 48,52,56, 60, 64, 68, 72, 76, 80, 84, 88,92,96,100,104,108,112,116,120,124	
F (FORTRAN)	-	7,10,13,16,19,22,25,28,31,34, 37,40,43,46,49,52,55,58,61,64, 67,70,73,76,79,82,85,88,91,94	DEFAULT FOR NETEDF
R (RATFOR)	-	3, 6, 9,12,15,18,21,24,27,30, 33,36,39,42,45,48,51,54,57,60, 63,66,69,72,75,78,81,84,87,90	DEFAULT FOR NETEDR

IF FEWER THAN 30 TABS ARE SPECIFIED, ADDITIONAL TABS ARE SET EVERY 3 POSITIONS FOLLOWING COLN (UP TO 30 TABS).

- 4) IN ASCII MODE, THE NUMBER OF DELAY CHARACTERS IN THE LINE FEED/ CARRIAGE RETURN SEQUENCE HAS BEEN REDUCED TO SPEED UP TYPING. AS A RESULT, NETED MAY NOT BE USABLE (IN ASCII MODE) ON CERTAIN TERMINALS (SUCH AS THE GE TERMINETS).
- 5) THE TOGGLE COMMAND 'V' ALSO AFFECTS THE PRINTOUT OF THE <TOP OF FILE> AND <BOTTOM OF FILE> MESSAGES.
- 6) THE 'NFPOS' (NOT FOUND POSITION) TOGGLE HAS BEEN REMOVED.
- 7) USE 'ATTACH,NETEDF' OR 'ATTACH,NETEDR' FOR THE DESIRED VERSION.

THE FOLLOWING SUMMARIZES VERSION 1.2 OF NETED/NETEDF/NETEDR ON THE CDC 6000:

ADDITIONS:

- 1) A <STRING>
APPEND <STRING> TO THE CURRENT LINE.
- 2) DUP X
DUPLICATE THE CURRENT LINE X TIMES. IF X IS PRECEDED BY A MINUS SIGN, THE POINTER IS NOT MOVED.
- 3) FA <STRING>
FBA <STRING>
LA <STRING>
LBA <STRING>
SIMILAR TO F/FB/L/LB. LIST ALL LINES BEGINNING WITH <STRING> (FA/FBA) OR CONTAINING <STRING> (LA/LBA) FROM THE CURRENT LINE TO THE END OF THE WORKFILE. THE POINTER IS NOT MOVED.
- 4) PD X
PRINT X LINES, BEGINNING WITH THE CURRENT LINE, DOUBLE SPACED. IF X IS PRECEDED BY A MINUS SIGN, THE POINTER IS NOT MOVED.
- 5) UC X G
UNDO THE LAST CHANGE IN THE NEXT X LINES, BEGINNING WITH CURRENT LINE. THIS COMMAND IS SHORTHAND FOR
C /<STRING2>/<STRING1>/ X G
THE <STRING>S ARE FLIPPED FOR THE DURATION OF THE COMMAND. IF X IS PRECEDED BY A MINUS SIGN, THE POINTER IS NOT MOVED. IF G IS SPECIFIED, THE CHANGE IS GLOBAL (EACH OCCURRENCE IN EACH OF THE X LINES).
- 6) Y N
PRINT A LINE OF N COLUMN MARKERS. FOR EXAMPLE,
Y 37
PRINTS
....9...10...13...20...29...30...35..
N OMITTED IMPLIES N=72
N=0 IMPLIES N=1
N>140 IMPLIES N=140

CHANGES:

- 1) C /<STRING1>/<STRING2>/ X G
IF X IS PRECEDED BY A MINUS SIGN, THE POINTER IS NOT MOVED.
- 2) RC X G
REPEAT THE LAST CHANGE FOR THE NEXT X LINES, BEGINNING WITH THE CURRENT LINE. IF X IS PRECEDED BY A MINUS SIGN, THE POINTER IS NOT MOVED.

DELETIONS:

- 1) THE NFPDS TOGGLE HAS BEEN REMOVED.

REMARKS:

- 1) NETED, NETEDF AND NETEDR NOW DIFFER ONLY IN THE FOLLOWING TWO FEATURES:

	NETED	NETEDF	NETEDR
INITIAL E>, I> PROMPTING (CONTROLLED BY * TOGGLE)	ON	OFF	OFF
TABS	ONE TAB AT COL 7. ONLY DEFINED TABS ARE SET.	30 TABS FOR FORTRAN AT 7,10,13,..., 94 30 TABS ARE ALWAYS SET. TABS ARE SET EVERY 3 COLUMNS AFTER THE LAST USER-DEFINED TAB, IF NECESSARY.	30 TABS FOR RATFOR AT 3,6,9,...,90

FUTURE VERSIONS:

- 1) NETED, NETEDF AND NETEDR ARE CURRENTLY THREE SEPARATE PROGRAMS. FUTURE VERSION 2.0 WILL MERGE THESE INTO A SINGLE PROGRAM AND USE THE SECOND PARAMETER ON THE EXECUTE CARD TO PRESET THE TABS, PROMPTING AND MODE (DISPLAY CODE/ASCII). THIS PARAMETER WILL ALSO ALLOW FOR COBOL, PASCAL, COMPASS, AND NO TABS SETTINGS.

THE NETED MANUAL:

- 1) "THE CDC NETED REFERENCE MANUAL" IS BEING REWRITTEN IN A DIFFERENT FORMAT AND IS EXPECTED TO BE PUBLISHED EARLY NEXT YEAR. IT WILL HAVE THE SAME FORMAT AS "THE BURROUGHS NETED REFERENCE MANUAL" WHICH SHOULD BE PUBLISHED AT ABOUT THE SAME TIME.
- 2) THIS SUPPLEMENT WAS BEEN ADDED TO THE END OF THE CURRENT NETED MANUAL. IT IS NOT NECESSARY TO REPRINT THE ENTIRE MANUAL AT THIS TIME.

THE FOLLOWING SUMMARIZES VERSIONS 1.3 AND 1.4 OF NETED/NETEDF/
NETEDR ON THE CDC 6000:

ADDITIONS:

- 1) - (A MINUS SIGN)
MOVE BACKWARD ONE LINE (SHORTHAND FOR 'N -1').
- 2) AL <STRING>
ADD <STRING> AT THE LEFT OF THE CURRENT LINE.
(SHORTHAND FOR C//<STRING>/)
- 3) AR <STRING>
ADD <STRING> AT THE RIGHT OF THE CURRENT LINE.
(SAME AS A)
- 4) PA
PRINT ALL LINES. <TOP OF FILE> AND <BOTTOM OF FILE> ARE
NOT PRINTED. THE POSITION OF THE POINTER IS NOT ALTERED
BY THIS COMMAND.
- 5) PDA
PRINT ALL LINES DOUBLE-SPACED. <TOP OF FILE> AND <BOTTOM
OF FILE> ARE NOT PRINTED. THE POSITION OF THE POINTER IS
NOT ALTERED BY THIS COMMAND.
- 6) PA X
PRINT THE CURRENT LINE AND X LINES ON EITHER SIDE OF IT.
(X IS POSITIVE AND <= 9)
- 7) STR
LIST THE MOST RECENT DEFINITIONS OF THE 5 REMEMBERED
STRINGS FOR THE FOLLOWING COMMANDS: A/AR, AL, C (2
STRINGS), F/FA/FR/FBA/L/LA/LB/LBA.
- 8) TI
LIST THE ELAPSED WALL CLOCK, CP AND IO TIMES.
- 9) TL X
TRUNCATE X COLUMNS FROM THE LEFT OF THE CURRENT LINE.
- 10) TR X
TRUNCATE X COLUMNS FROM THE RIGHT OF THE CURRENT LINE.
- 11) WHAT
LIST THE FOLLOWING INFORMATION ABOUT THE NETED WORKFILE:
- NETED FILE NAME (FLAGGED WITH * IF A PERMANENT FILE)
- FILE KIND ('ASCII' IF IT IS AN ASCII FILE)
- LINE LENGTH (AT THIS LEVEL OF NETED, ALWAYS 140)
- NUMBER OF LINES IN THE WORKFILE
- A LIST OF THE TOGGLES WHICH ARE SET
- THE CURRENT VALUES OF LM, RM, IN AND THE MARGIN WIDTH

12) EIGHT WORD PROCESSING-RELATED COMMANDS:

- 1) CENTER X
CENTER THE NEXT X LINES WITHIN LM-RM MARGINS.
 - 2) IN X
SET THE PARAGRAPH INDENTATION FOR X COLUMNS.
(THIS SETTING WILL BE USED BY A FUTURE OPTION.)
 - 3) LEFT X
LEFT-JUSTIFY THE NEXT X LINES WITHIN LM-RM MARGINS.
 - 4) LEN X
LIST THE LENGTHS OF EACH OF THE NEXT X LINES.
 - 5) LM X
SET THE LEFT MARGIN AT COLUMN X.
 - 6) LPL X
LIST PAGE LENGTHS OF THE DOCUMENT IN THE WORKFILE.
FLAG ALL PAGES > X LINES LONG. PRINT A SUMMARY.
CAPRIAGE CONTROL CHARACTERS OTHER THAN 'I', ' ', '+',
'0', '-', 'S', AND 'T' ARE TOTALED BUT IGNORED FOR LINE
COUNTS. THE POSITION OF THE POINTER IS NOT ALTERED BY
THIS COMMAND.
 - 7) RIGHT X
RIGHT-JUSTIFY THE NEXT X LINES WITHIN LM-RM MARGINS.
 - 8) RM X
SET THE RIGHT MARGIN AT COLUMN X.
- 13) IF THE 'V' TOGGLE IS SET, NETED WILL PRINT A TIME SUMMARY BEFORE
TERMINATING.

CHANGES:

- 1) X
X WITHOUT AN ARGUMENT WILL PRINT 72 COLUMN MARKERS.
X WITH A NEGATIVE ARGUMENT IS NOW INVALID.
- 2) HELP
THE HELP LISTING HAS BEEN MODIFIED TO GROUP THE TOGGLES
TOGETHER.

CORRECTIONS:

- 1) <CP> AND - WILL NOT PRINT THE LINE IF VERIFY IS RESET.
- 2) EOP/EOF PROCESSING IN ASCII MODE HAS BEEN CORRECTED.
- 3) 'DUP 1' HAS BEEN DISALLOWED.

DELETIONS:

NONE

REMARKS: ✓

NONE

FUTURE VERSIONS:

- 1) NETED, NETEDF AND NETEDR ARE CURRENTLY THREE SEPARATE PROGRAMS. FUTURE VERSION 2.0 WILL MERGE THESE INTO A SINGLE PROGRAM AND USE THE SECOND PARAMETER ON THE EXECUTE CARD TO PRESET THE TABS, PROMPTING AND MODE (DISPLAY CODE OR ASCII). THIS PARAMETER WILL ALSO ALLOW FOR COBOL, PASCAL, COMPASS, AND NO TABS SETTINGS.

THE NETED MANUAL:

- 1) THIS SUPPLEMENT HAS BEEN ADDED TO THE END OF THE CURRENT NETED MANUAL. IT IS NOT NECESSARY TO REPRINT THE ENTIRE MANUAL AT THIS TIME.
- 2) "THE CDC NETED REFERENCE MANUAL" IS BEING REWRITTEN IN A DIFFERENT FORMAT AND IS EXPECTED TO BE PUBLISHED LATER THIS YEAR. IT WILL BE HAVE THE SAME FORMAT AS "THE BURROUGHS NETED REFERENCE MANUAL".

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